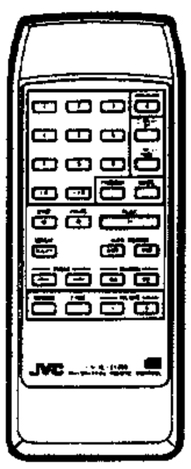
XL-Z1050TN

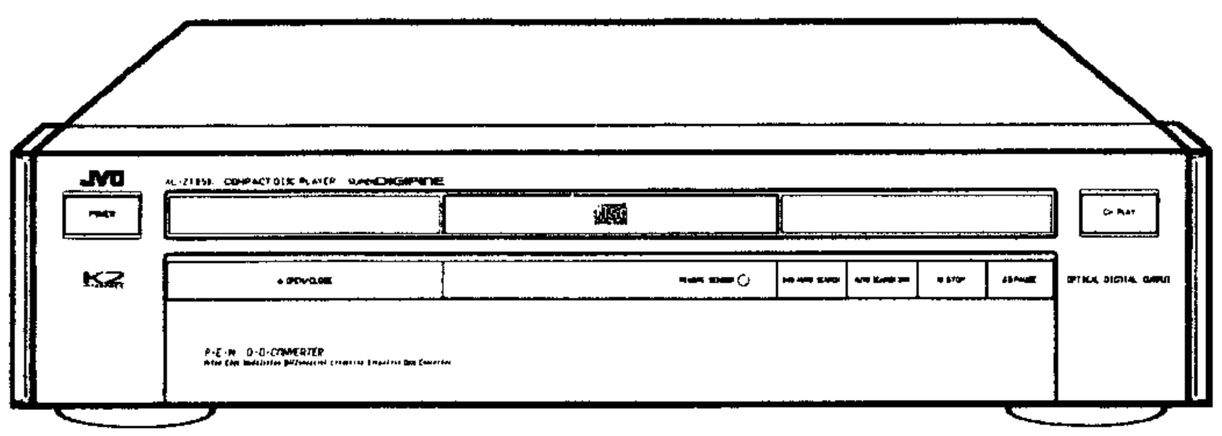
JVC

SERVICE MANUAL

COMPACT COMPONENT SYSTEM

XL-Z1050TN





COMPACT disc DIGITAL AUDIO

COMPU LINK
Remote
Control Component

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No. 20274
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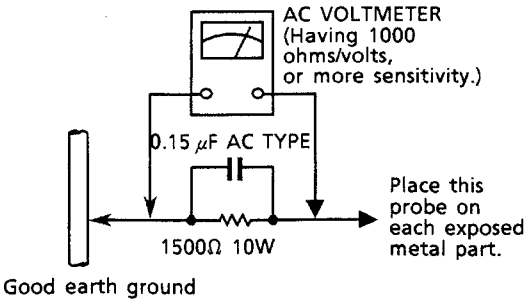
Safety Precautions

1. The design of this product contains special hardware and many circuits and components specially for safety purposes. For continued protection, no changes should be made to the original design unless authorized in writing by the manufacturer. Replacement parts must be identical to those used in the original circuits. Services should be performed by qualified personnel only.
2. Alterations of the design or circuitry of the product should not be made. Any design alterations of the product should not be made. Any design alterations or additions will void the manufacturer's warranty and will further relieve the manufacture of responsibility for personal injury or property damage resulting therefrom.
3. Many electrical and mechanical parts in the products have special safety-related characteristics. These characteristics are often not evident from visual inspection nor can the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in the Parts List of Service Manual. Electrical components having such features are identified by shading on the schematics and by (⚠) on the Parts List in the Service Manual. The use of a substitute repalcement which does not have the same safety characteristics as the recommended replacement parts shown in the Parts List of Service Manual may create shock, fire, or other hazards.
4. The leads in the products are routed and dressed with ties, clamps, tubings, barriers and the like to be separated from live parts, high temperature parts, moving parts and/or sharp edges for the prevention of electric shock and fire hazard. When service is required, the original lead routing and dress should be observed, and it should be confirmed that they have been returned to normal, after re-assembling.
5. Leakage currnet check (Electrical shock hazard testing)
   After re-assembling the product, always perform an isolation check on the exposed metal parts of the product (antenna terminals, knobs, metal cabinet, screw heads, headphone jack, contorl shafts, etc.) to be sure the product is safe to operate without danger of electrical shock.
   Do not use a line isolation transformer during this check.
   - Plug the AC line cord directly into the AC outlet. Using a "Leakage Current Tester", measure the leakage current from each exposed metal parts of the cabinet , particularly any exposed metal part having a return path to the chassis, to a known good earth ground. Any leakage current must not exceed 0.5mA AC (r.m.s.).
   - Alternate check method
     Plug the AC line cord directly into the AC outlet. Use an AC voltmeter having, 1,000 ohms per volt or more sensitivity in the following manner. Connect a 1,500Ω 10 W resistor paralleled by a 0.15 μF AC-type capacitor between an exposed metal part and a known good earth ground.
     Measure the AC voltage across the resistor with the AC voltmeter.
     Move the resistor connection to each exposed metal part, particularly any exposed metal part having a return path to the chassis, and meausre the AC voltage across the resistor.
     Now, reverse the plug in the AC outlet and repeat each measurement. Any voltage measured must not exceed 0.75 V AC (r.m.s.). This corresponds to 0.5 mA AC (r.m.s.).



Warning

1. This equipment has been designed and manufactured to meet international safety standards.
2. It is the legal responsibility of the repairer to ensure that these safety standards are maintained.
3. Repairs must be made in accordance with the relevant safety standards.
4. It is essential that safety critical components are replaced by approved parts.
5. If mains voltage selector is provided, check setting for local voltage.

Important for Laser Products

1. CLASS 1 LASER PRODUCT
2. DANGER : Invisible laser radiation when open and interlock failed or defeated. Avoid direct exposure to beam.
3. CAUTION : There are no serviceable parts inside the Laser Unit. Do not disassemble the Laser Unit. Replace the complete Laser Unit if it malfunctions.
4. CAUTION : The compact disc player uses invisible laser radiation and is equipped with safety switches which prevent emission of radiation when the drawer is open and the safety interlocks have failed or are defeated. It is dangerous to defeat the safety switches.
5. CAUTION : If safety switches malfunction, the laser is able to function.
6. CAUTION : Use of controls, adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.
7. CAUTION : The compact disc player provides a laser diode of wavelength 780-790nm and optical output power typical 3mW at the laser diode.

VARNING : Osynlig laserstrålning när denna del är öppnad och spärren är urkopplad. Betrakta ej strålen.

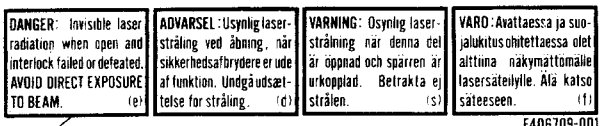
VARO : Avattaessa ja suojalukitus ohitettaessa olet alttiina näkymättömälle lasersäteilylle. Älä katso säteeseen.

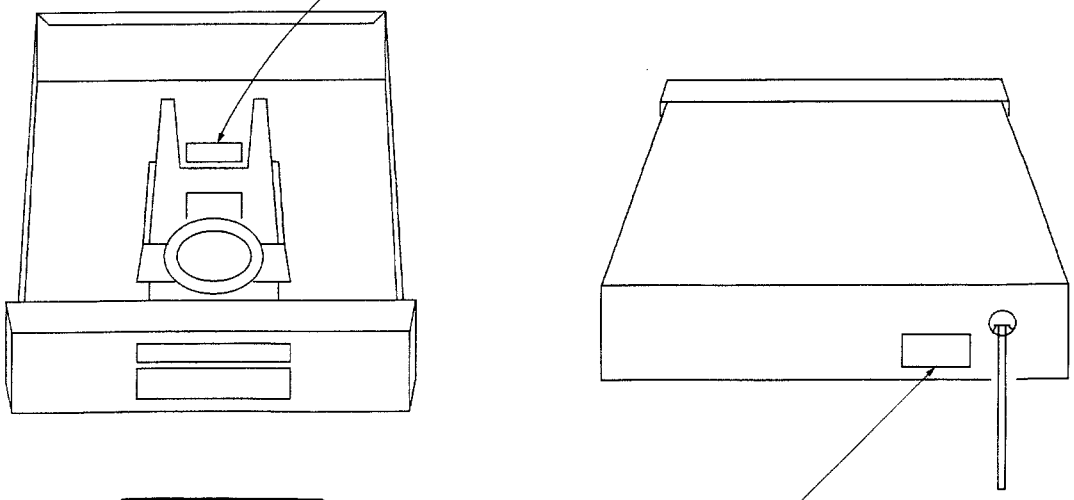
ADVARSEL : Usynlig laserstråling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

ADVARSEL : Usynlig laserstråling ved åpning, når sikkerhetsbryteren er avslott. unngå utsettelse for stråling.

REPRODUCTION AND POSITION OF LABELS

WARNING LABEL
(Except for the U.S.A.)


DANGER: Invisible laser radiation when open and interlock failed or defeated. AVOID DIRECT EXPOSURE TO BEAM. (e)
ADVARSEL: Usynlig laserstråling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling. (d)
VARNING: Osynlig laserstrålning när denna del är öppnad och spärren är urkopplad. Betrakta ej strålen. (s)
VARO: Avattaessa ja suojalukitus ohitettaessa olet alttiina näkymättömälle lasersäteilylle. Älä katso säteeseen. (f)
E406709-001



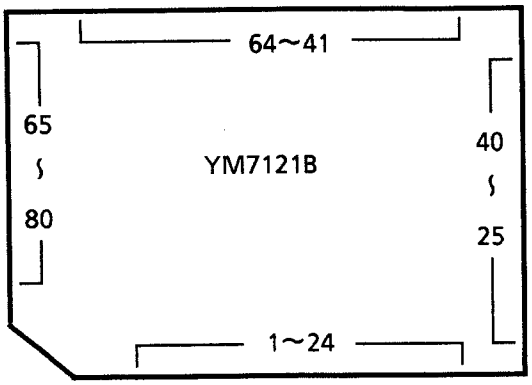
CLASSIFICATION LABEL
(Except for the U.S.A. and Canada)

Description of Major LSIs

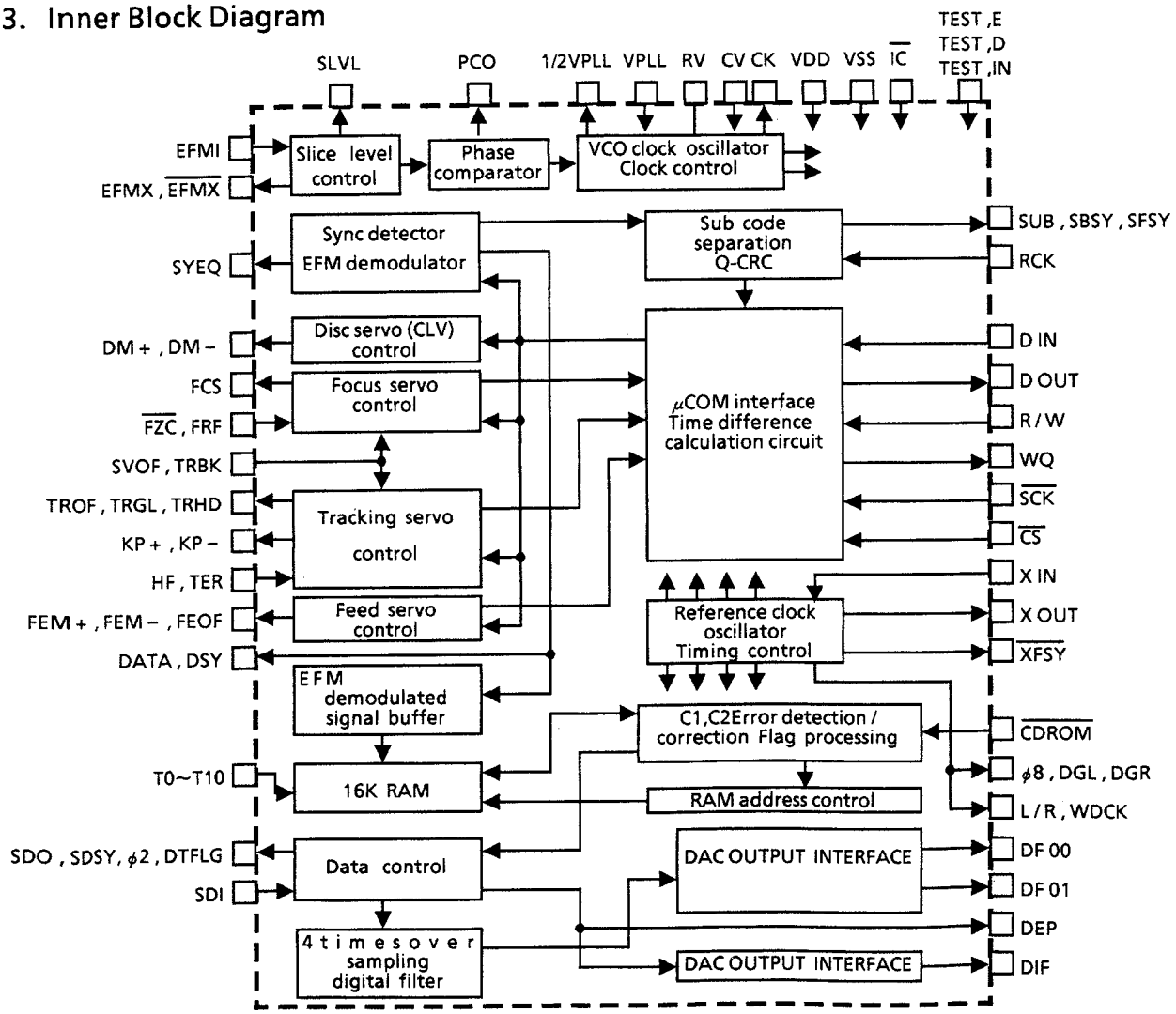
■YM7121B(IC401)

1. Outline

YM7121 is a C-MOS LSI for signal processing and servo control (SVC) in a CD player. It is used for the demodulation of the EFM signal from the laser pick up , detection / correction of the error signal , signal processing in digital filtering , etc. and for various servo controls (focusing , disc , tracking and feed servos).
And it contains digital interface which output the audio digital signals in S-RAM and CD-player. This digital interface matches EIAJ standards.



3. Inner Block Diagram



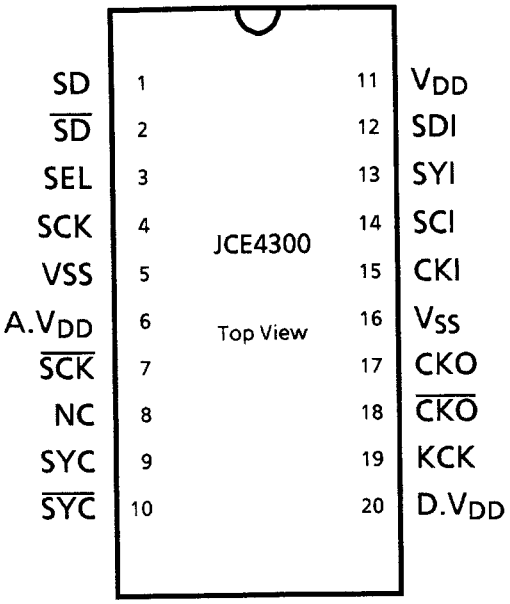
4. Terminal Function

Pin No.	Symbol	I/O	Function and Operation
1	CV	I	Adequate time constant is added to this terminal and input the PCO output. This makes the structure of clock reproduce circuit by inner VCO circuit.
2	RV	–	RV terminal is standard voltage terminal of inner VCO. And capacity for stabilizing is added to this terminal.
3 32 72	VDD	–	These are +5V power supply terminals.
4 5 70	TEST. IN TEST. E TEST. D	I I I	These terminals are for test.
6	SYEQ	O	This is the check output terminal, it becomes high when flame synchronizing signal detected from EFM pattern coincides frame synchronizing signal from internal counter.
7	DSY	O	DSY is synchronizing signal which becomes high when first signal of data output comes in. This terminal is the check terminal.
8	DATA	O	This terminal is for checks. The DATA is a serial signal of CK bit rate and it contains 8 bit EFM demodulation signal and 5 bit data control signal in 17 bit.
9	CK	O	CK has 4.3218 MHz clock.
10~19	T0~T9	I	This terminal is internal RAM test terminal, and connected GND.
22	DEP	O	De-emphasis is necessary when this terminal is high.
23	DIF	O	DIF is digital audio interface format output matched EIAJ standards.
24	SDO	O	SDO is a serial signal output of $\phi 2$ bit rate. (The MSB puts in at first.)
25	SDI	I	SDI is the input terminal of 4 times over sampling digital filter. It is usually connected with SDO.
26	SDSY	O	This terminal changes the Lch / Rch by LSB of the SDO.
27	DTFLG	O	Not used.
28	$\phi 2$	O	$\phi 2$ is 2.1168 MHz crystal clock.
29, 52, 77	VSS	–	GND
30	XOUT	O	Not used.
31	XIN	I	Input from crystal clock.
33 34 35 36 37 38 39 40 41 42 43 44 45	$\overline{\text{XFSY}}$ SUB SBSY RCK $\overline{\text{SFSY}}$ $\overline{\text{CDROM}}$ Φ8 WDCK L/R DGL DGR DF01 DF00	O O O I O O O O O O O O O	Not used.
46	$\overline{\text{SCK}}$	I	This terminal is connected to μCOM. It is an input terminal that carries the clock signal for data transfers.
47	R/W	I	This connects with microcomputer and it is an output terminal for switching data transmission mode. it enables to transmit data from SVC to microcomputer when R/M is "L" and from microcomputer to SVC when R/W is "H".
48	$\overline{\text{CS}}$	I	This is a chip select terminal for YM7121.
49	DOUT	O	This terminal is the data output terminal connected to μCOM. When R / W is low, data is transferred from YM7121 to μCOM, according to theSCK clock input.

Pin No.	Symbol	I/O	Function and Operation
50	WQ	O	This terminal is connected to μCOM. It is a request signal which demands to μCOM inputting the data transfer (YM7121 to μCOM).
51	DIN	I	This is a data input terminal connected to μCOM. When R/W is high, the data is transferred from μCOM to YM7121 according to the SCK clock input.
53 54	DM+ DM−	O O	These terminals output the PWM to control the speed of spindle motor. The speed of the motor goes up when DM+ is high, and slows down when DM− is high: both terminals can not become high simultaneously.
55 56 60 61 62 63 64	HF TER TRHD TRGL TROF KP− KP+	I I O O O O O	When tracks are being crossed during serches, the amplitude variation of the generated HF signal is sampled at the zero − cross point of the tracking error signal TER and the TROF signal is output. The level variations of this signal turn the servo on and off, greatly facilitaing track acquisition. KP+ or KP− is output to conduct tracking, and TRHD is output during tracking to cause generation of the tracking error signal. The TRGL signal is for increasing the tracking gain after tracking is completed.
57 58 59	FEM+ FEM− FEOF	O O O	The FEM+ and FEM− are output as high speed feed signals, and FEOF signal is output for cutting the feed servo during high speed feed.
65	TRBK	I	TRBK is input to apply tracking brake from outside. TRGL becomes low with high input and inner control signal TBKE becomes high.
66	SVOF	I	When the signal inputs to SVOF, tracking and feed servo set to OFF. TROF and FEOF become "H" with high input, and TRHD, KP+, KP− become low.
67 58 59	$\overline{FZC}$ FCS FRF	I O I	These terminals are used for controlling the focus servo. The FCS is for a leading signal of Focusing; the signal, generated when the focus point is achieved, terminate the focusing operation; and FCO flag is dropped internally by FRF signal generated when reflected light is detected.
71	$\overline{IC}$	I	YM7121 needs initializing when power supply turn on. IC will be low more than 400μs since XIN is input clock with VDD standard.
73 74 75	SLVL EFMX $\overline{EFMX}$	O O O	Amplitude limited, mutually anti-phased signals are output from EFMX and EMFX. Slice level is controlled by these signals and external amplifier. SLVL is output amplitude alteration component of both terminals. When integral circuit is connected to external. YM7121 easily can control slice level.
76	EFMI	I	This terminal is input EFM signal. (1~2 Vpp)
78	PCO	O	This terminal outputs the phase difference when the polarity of the clock and the EFM pattern changes.
79	VPLL	I	This terminal is input D.C. voltage matched VCO free run frequency. (17.2872 MHz)
80	1/2 VPLL	O	This terminal outputs a half of VPLL input, and capacity for stabilizing is added to this terminal.

■ JCE4300 (IC151) : Gate Array for K2 Interface

1. Terminal Layout



2. Terminal Functions

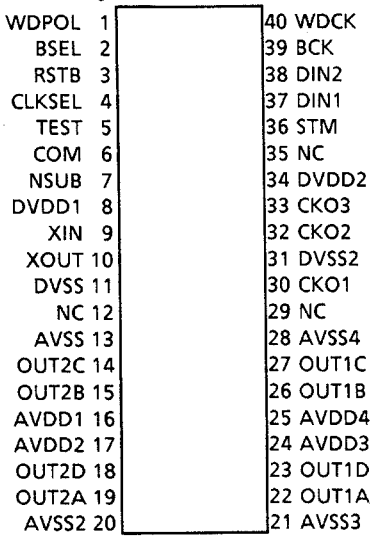
Pin No	Terminal Name	I/O	Function and Operations
1	SD	O	Data output terminal which changed the format.
2	$\overline{SD}$	O	Inverted SD output. (not used)
3	SEL	I	Terminal which selects inner operation's logic against reference clock.
4	SCK	O	Bit clock output terminal for taking in SD.
5	V_{SS}	-	This is not connected inside with pin 15 of ground terminal.
6	A.V_{DD}	-	+5V power supply for analog.
7	$\overline{SCK}$	O	Inverted SCK output terminal. (not used)
8	NC	-	———
9	SYC	O	Signal output terminal which changes L/R channels.
10	$\overline{SYC}$	O	Inverted SYC output. (not used)
11	D.V_{DD}	-	+5V power supply for digital.
12	KCK	O	Not used.
13	$\overline{CKO}$	O	Inverted CKO output terminal. (not used)
14	CKO	O	Reference clock output terminal. (16.9344MHz) It's a buffered CKI.
15	V_{SS}	-	This is not connected inside with pin 15 of ground terminal.
16	CKI	I	Input terminal of reference clock.
17	SCI	I	Bit synchronous clock serial data.
18	SYI	I	Signal input terminal which changes L/R channel. It becomes L channel when "H" and R channel when "L".
19	SDI	I	Serial data input terminal.
20	V_{DD}	-	+5V power supply.

■ JCE4501(IC302) : D / A CONVERTER

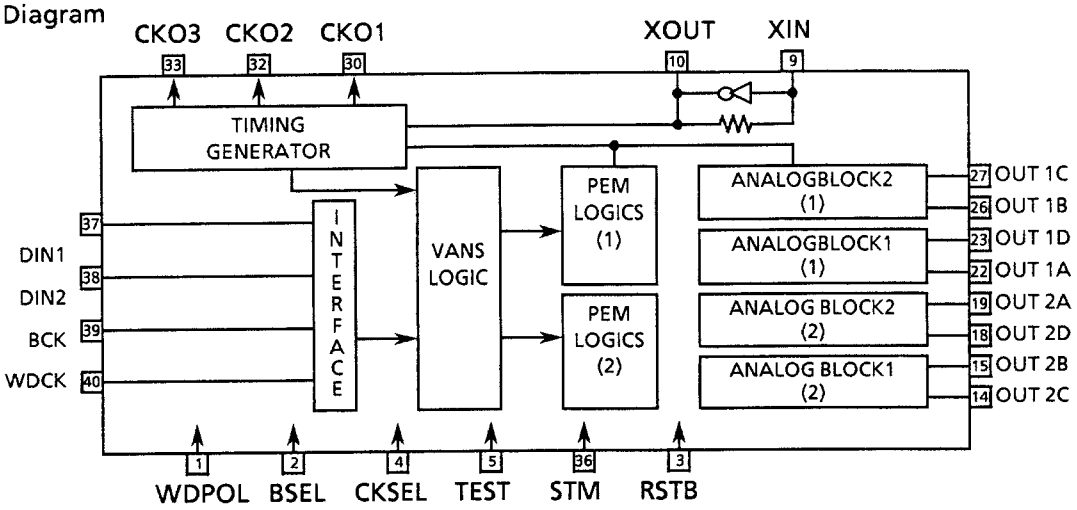
1. Outline

The JCE4501 is a CMOS digital-analog converter with independent left and right channels. It was developed for PCM digital audio equipment.I t features pulse edge modulation (PEM) and Victor advanced noise shaping (VANS) for resolution equipment to 20 bits(0-20kHz) and a low distortion ratio. At JVC, this type of digital-analog converter is called a DD converter.

2. Terminal Layout



3. Block Diagram

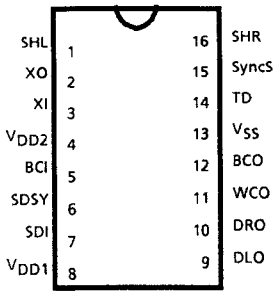


4.Description

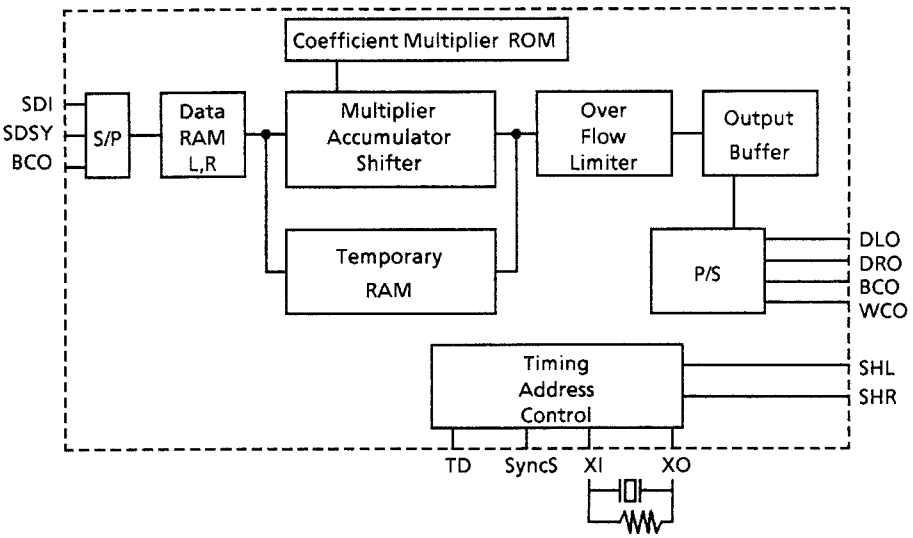
Pin No	Symbol	I/O	Description	Pin No	Symbol	I/O	Description
1	WDPOL	I	Word data polarity switching pin	21	AVSS3	--	Analog ground pin 3
2	BSEL	I	H:CDX2554P format,L: YM3414 format	22	OUT1A	O	1A PEM output pin
3	RSTB	I	Reset pin (low active)	23	OUT1D	O	1D PEM output pin
4	CLKSEL	I	H: 256fs mode,L: 384fs mode	24	AVDD3	--	Analog power supply pin 3
5	TEST	I	Test mode switching pin	25	AVDD4	--	Analog power supply pin 4
6	COM	I	COM board voltage fastening pin	26	OUT1B	O	1B PEM output pin
7	NSUB	I	Silicon board voltage fastening pin	27	OUT1C	O	1C PEM output pin
8	DVDD1	--	Digital power supply pin 1	28	AVSS4	--	Analog ground pin 4
9	XIN	I	Crystal oscillator input pin	29	NC	--	To ground
10	XOUT	O	Crystal oscillator output pin	30	CKO1	O	Clock output pin 1(384fs output)
11	DVSS1	--	Digital ground pin 1	31	DVSS2	--	Digital ground pin 2
12	NC	--	To ground	32	CKO2	O	Clock output pin 2(192fs output)
13	AVSS1	--	Analog ground pin 1	33	CKO3	O	Clock output pin 3(128fs output)
14	OUT2C	O	2C PEM output pin	34	DVDD2	--	Digital power supply pin 2
15	OUT2B	O	2B PEM output pin	35	NC	--	Non connection
16	AVDD1	--	Analog power supply pin 1	36	STM	I	Stereo/Monaural switching pin H: stereo,L:left channel,reversed polarity left channel
17	AVDD2	--	A nalog power supply pin 2	37	DIN1	I	Left channel 18-bits 8Fs serial data input
18	OUT2D	O	2D PEM output pin	38	DIN2	I	Right channel 18-bits 8Fs serial data input
19	OUT2A	O	2A PEM output pin	39	BCK	I	Bit clock input pin
20	AVSS2	--	Analog ground pin 2	40	WDCK	I	Word clock input pin

■ YM3414 (IC152) : 8-Tines Oversampling (18-Bit resolution) Digital Filter

1. Terminal Layout



2. Internal Block Diagram

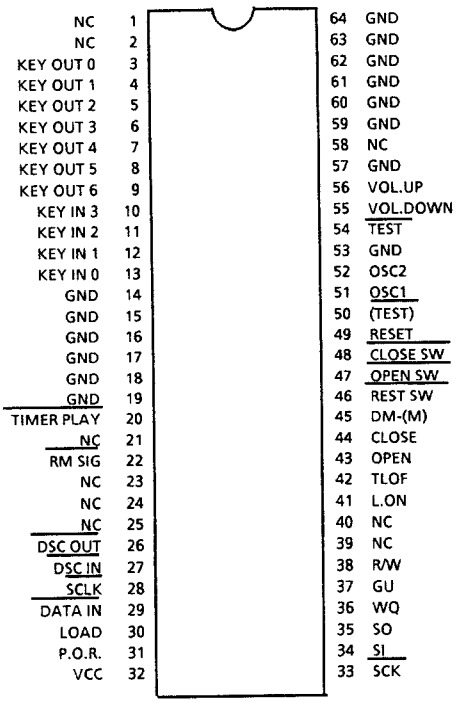


3. Pin Function Description

Pin No.	Symbol	I/O	Function and Operation
1	SHL	O	D/A converter 1 (TD = L) : L-ch deglitcher signal (at four times) D/A converter 2 (TD = H) : L/R-ch deglitcher signal (at eight times)
2 3	XO XI	O I	Performs crystal oscillation between XI and XO. 16.9344MHz (can be input direclty to XI).
4	V_{DD2}	–	Crystal oscillation and deglitcher signal + 5V power terminal.
5	BCI	I	Bit clock input terminal of input data.
6	SDSY	I	Clock showing the L/R-ch separation of input data and input timing.
7	SDI	I	Data input terminal.
8	V_{DD1}	–	+ 5V power terminal of digital signal system.
9	DLO	O	D/A converter 1 (TD = L) : L-and R-ch data output terminal. (at four times) D/A converter 2 (TD = H) : L-ch data output terminal. (at eight times)
10	DRO	O	R-ch data output terminal.
11	WCO	O	Output data DLO and DRO word clocks.
12	BCO	O	Output data bit clock.
13	V_{SS}	–	GND terminal.
14	TD	I	D/A converters 1-2 changeover terminal. D/A converter 1 (four times) = L. D/A converter 2 (eight times) = H.
15	SyncS	I	Syschronizing signal for absorbing asynchronous input jitter (SyncS = H : Complete synchronous input , SyncS = L : SDSY prohibited).
16	SHR	O	R-ch deglitcher signal at D/A converter 1.

■ HD404019RB20S (IC701) : Micro-computer

1. Terminal Layout

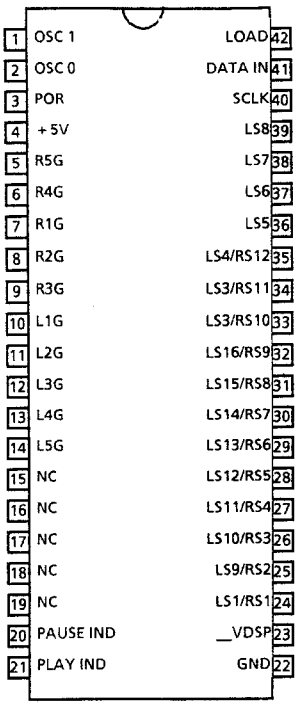


2. Pin Description

Pin No.	Symbol	I/O	Functions and Operations	Pin NO.	Symbol	I/O	Functions and Operations
1 2 21 23~25 39 40 58	NC	--	Non connection	37	GU	O	Gain-up output.
3~9	KEY OUT0~6	O	Key matrix output	38	R/W	O	Read / Write signal output.
10~13	KEY IN 0~3	O	Key matrix input	41	L.ON	O	Laser on signal output.
14~19 53 57 59~64	GND	--	Ground	42	TLOF	O	Tracking servo off signal output.
20	TIMER PLAY	I	L:Timer play mode H:Nomal mode (This terminal is set at "H").	43	OPEN	O	Open signal output.
22	RM SIG	I	Accepts remote control signal.	44	CLOSE	O	Close signal output.
26	DSC OUT	O	Outputs compu-link signal.	45	DM-(M)	I	Spindle moter stopping signal input.
27	DCS IN	I	Accepts compu-link signal.	46	REST SW	I	Rest switch input.
28	SCLK	O	Clock signal output to IC201.	47	OPEN SW	I	Open switch input.
29	DATA IN	O	Data signal output to IC201.	48	CLOSE SW	I	Close switch input.
30	LOAD	O	Load signal output to IC201.	49	RESET	I	Reset signal input.
31	P.O.R.	O	P.O.R. signal output to IC201.	50	(TEST)	I	Pull up.
32	VCC	--	Power terminal (+ 5V)	51	OSC1	I	Clock oscillation input.
33	SCK	O	Clock output to IC401.	52	OSC2	O	Clock oscillation output.
34	SI	I	Serial data input from IC401.	54	TEST	I	L:TEST mode
35	SO	O	Serial data output from IC401.	55	VOL.DOWN	O	Down output to Remo-con volume.
36	WQ	I	Write request signal input from IC401.	56	VOL.UP	O	Up output to Remo-con volume.

■ MSC7112-01SS (IC201) : Flourescent Dispaly Driver

(1) Top View

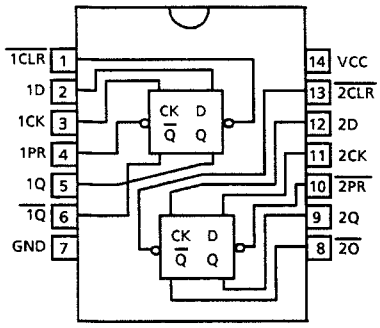


(2) Pin Functions

Pin No.	Pin Name	I/O	Functions
1 2	OCS 1 OSC 0	I O	Input to the oscillator circuit. Oscillator circuit is made up by connecting an external capacitor and resistor.
3	$\overline{\text{POR}}$	I	Reset signal input to the internal logic circuit when turning on.
4	+5V	--	Power suppry
5~16	R1G~R5G	O	FL display tube drive signal.
10~14	L1G~ L5G	O	LED drive signal : Not use
15~19	NC	--	No Connection
20	PAUSE IND	O	PAUSE indicator
21	PLAY IND	O	PLAY indicator
22	GND	--	GND
23	_VDISP	--	FL power suppry for FL driver circuit.
24~39	LS1~LS16 RS1~RS12	O	FL segment control output.
40	SCLK	I	Clock signal to the shift register.
41	DATA IN	I	Digital audio data input.
42	LOAD	I	Disc load detect signal.

Internal Block Diagrams of Other ICs

■ μPD74HC74C (IC101)··· DUAL D FLIP FLOP WITH PRESET AND CLEAR

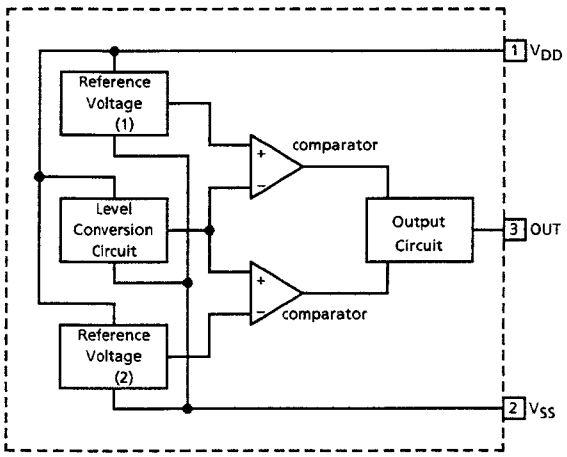


INPUTS				OUTPUTS		FUNCTION
$\overline{CLR}$	$\overline{PR}$	D	CK	Q	$\overline{Q}$	
L	H	X	X	L	H	CLEAR
H	L	X	X	H	L	PRESET
L	L	X	X	H	H	—
H	H	L	↑	L	H	—
H	H	H	↑	H	L	—
H	H	X	↓	Qn	$\overline{Qn}$	NO CHANGE

X : Don't care

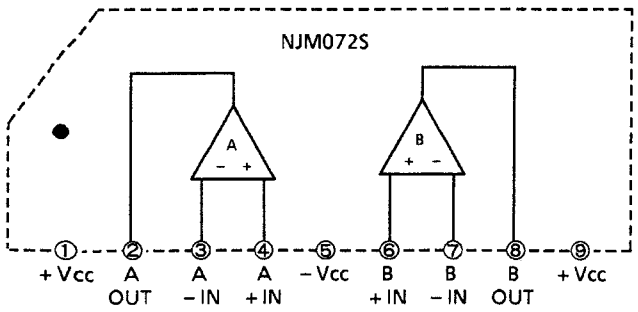
■ MN1281 : IC702 (Reset IC)

Block Diagram

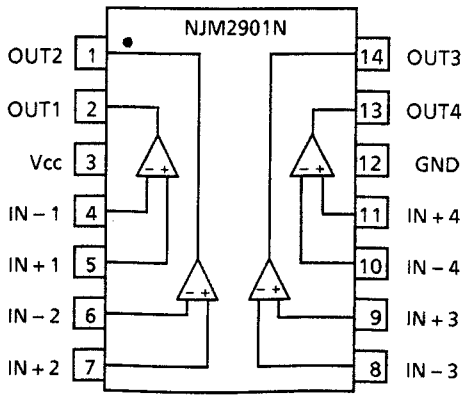


Pin No.	Pin Name	Functions
1	V_{DD}	Power supply
2	V_{SS}	Ground
3	OUT	Reset signal output : Low level is output when resetting : High level is output when cancelling the reset.

■ NJM072S (IC501) : Dual OP Amp.

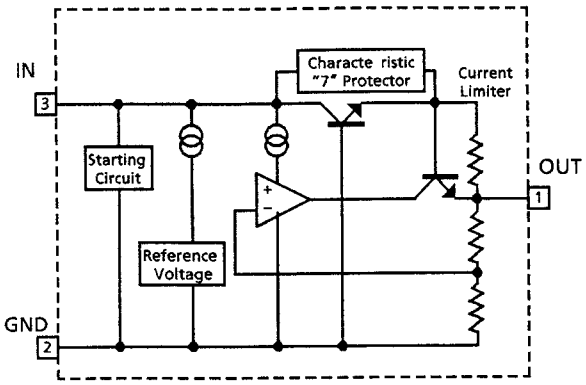


■ NJM2901N (IC502) : Comparator

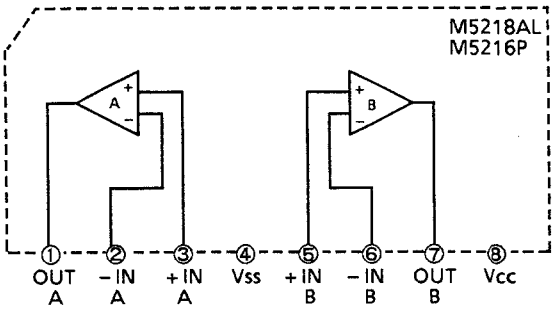


■ NJM78M05FD (IC301) : Regurator

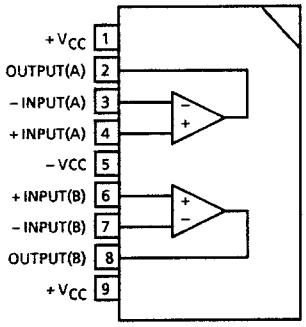
NJM78M05FD (IC901,902) (+5V)
NJM78L12A (IC903) (+12V)
NJM79L12A (IC904) (−12V)



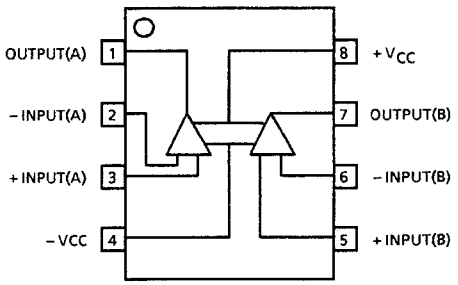
■ M5218AL (IC503, 802,851) : Dual OP Amp.
M5216P (IC971)



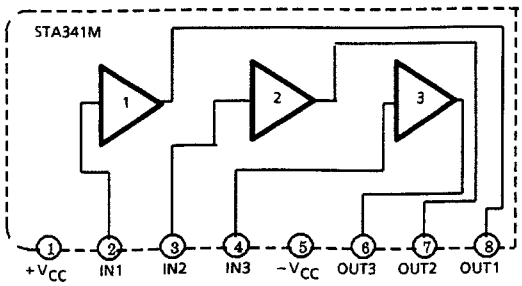
■ NJM5532S(IC323,324)
··· LOW NOISE DUAL OP AMP



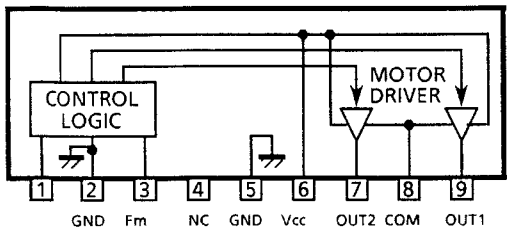
■ NJM5532DD(IC321,322)
··· LOW NOISE DUAL OP AMP



■ STA341M(IC801) : Motor Driver



■ BA6218 (IC971) ····· Motor Drive

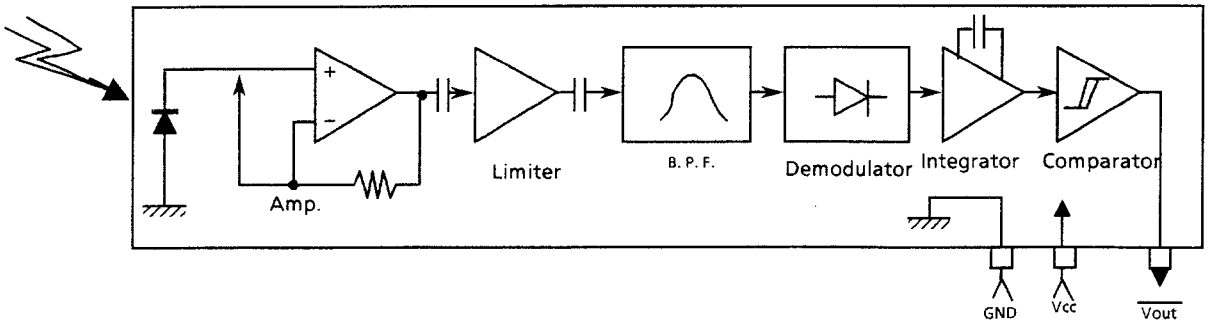


● Function table

3pin (IN)	1pin (IN)	7pin (OUT)	9pin (OUT)
H	L	H	L
L	H	L	H
H	H	L	L
L	L	OPEN	OPEN

【 Note 】 Input level "H" with more than 2.0V
Input level "L" with less than 0.8V

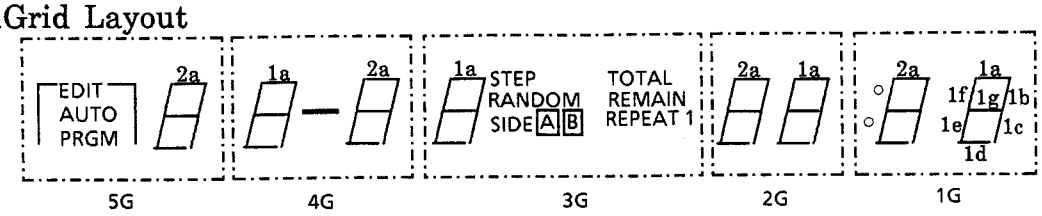
■ GP1U501X (IC202) : Receiver for remote controller



Internal Connections for the FL Display Tube

■ ELU0001-103:(FL202)

1.Grid Layout



2.Pin Connections

Terminal No	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
ELECTRODE	F1	F1	NP	NP	P1	P2	P3	P4	P5	P6	P7	P8	P9	1G	2G	3G	4G	5G

Terminal No	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35
ELECTRODE	NC	NC	NC	NC	NC	NC	P10	P11	P12	P13	P14	P15	P16	NP	NP	F2	F2

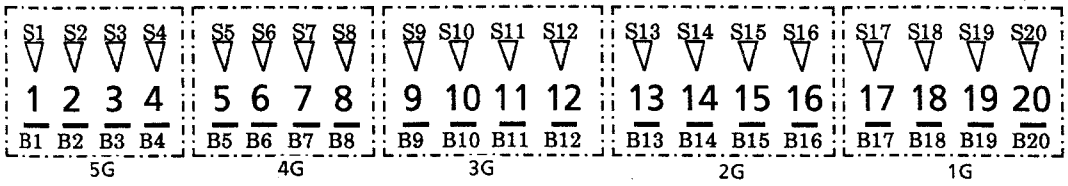
Note) F1,F2: Filament NP: No Pin
1G~5G: Grid NC: No Connection
P1~P16: Anode

3.Anode Connection Table

	5G	4G	3G	2G	1G
P1	—	—	REPEAT	—	○ ○
P2	2d	1d	1	2d	2d
P3	2e	1e	REMAIN	2e	2e
P4	2c	1c	TOTAL	2c	2c
P5	2g	1g	B	2g	2g
P6	2f	1f	A	2f	2f
P7	2b	1b	SIDE	2b	2b
P8	2a	1a	RANDOM	2a	2a
P9	—	—	STEP	—	—
P10	—	2d	1d	1d	1d
P11	—	2e	1e	1e	1e
P12	—	2c	1c	1c	1c
P13	—	2g	1g	1g	1g
P14	PRGM	2f	1f	1f	1f
P15	AUTO	2b	1b	1b	1b
P16	EDIT	2a	1a	1a	1a

■ ELU0001-104:(FL201)

1. Grid Layout



2. Pin Connections

Terminal No	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
ELECTRODE	F2	F2	NP	NP	P1	P2	P3	P4	P5	P6	P7	P8	P9	1G	2G	3G	4G	5G

Terminal No	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35
ELECTRODE	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	P10	P11	P12	NP	NP	F1	F1

Note) F1,F2: Filament NP: No Pin
1G~5G: Grid NC: No Connection
P1~P12: Anode

3.Anode Connection Table

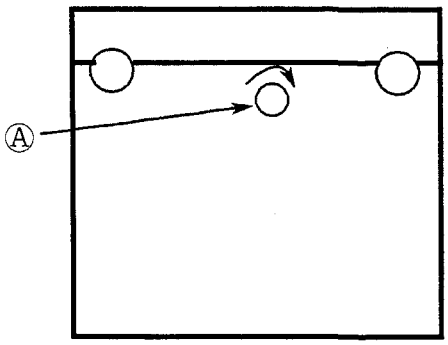
	5G	4G	3G	2G	1G
P1	S4	S5	S12	S13	S20
P2	4	5	12	13	20
P3	B4	B5	B12	B13	B20
P4	S3	S6	S11	S14	S19
P5	3	6	11	14	19
P6	B3	B6	B11	B14	B19
P7	S2	S7	S10	S15	S18
P8	2	7	10	15	18
P9	B2	B7	B10	B15	B18
P10	S1	S8	S9	S16	S17
P11	1	8	9	16	17
P12	B1	B8	B9	B16	B17

Disassembly Procedures

1 Removing the top cover

(1) Remove the 4 screws on both sides of the top cover and the 2 screws on the rear side.

(2) Gently spread both sides of the top cover to the outside, lift up the rear section, and remove the top cover.



2 Removing the tray

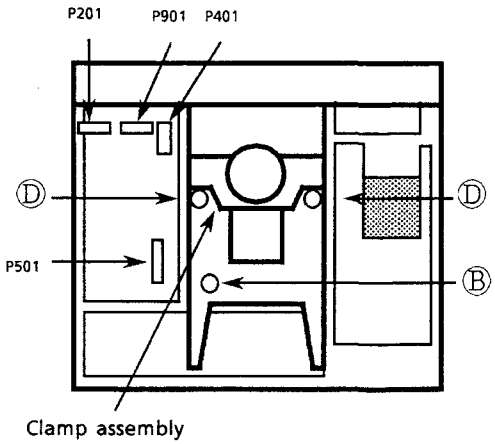
(1) Remove the top cover.

(2) Switch on the power. Press the OPEN / CLOSE switch to bring the tray forward and with the tray forward, switch off the power.

(3) Remove the screw on the tray Ⓑ.

(4) Pull the tray toward the front to move it.

Note : If the power does not come on due to breakdown or the like, insert a philips screwdriver through the hole at the bottom of the front panel and turn it clockwise to bring the tray forward Ⓐ.



3 Removing the mechanism assembly

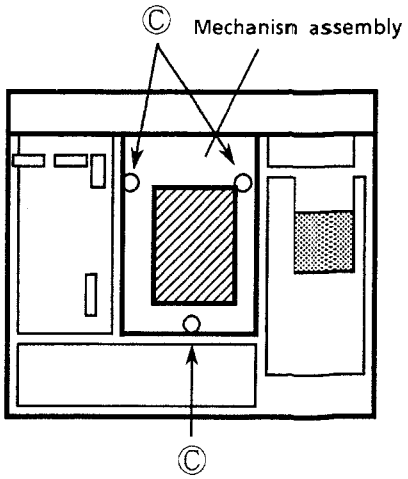
(1) Remove the top cover.

(2) Remove the tray.

(3) Remove the connectors (P401, P501).

(4) Remove the 2 screws Ⓓ holding the clamp assembly, then remove it.

(5) Remove the 3 screws © holding the mechanism assembly.



4 Removing the Audio P.C.B

(1) Remove the top cover.

(2) Remove the Rear panel.

(3) Remove the 4 screws fixing the circuit board.

(4) Remove the connectors (P301,P302,P303,P902).

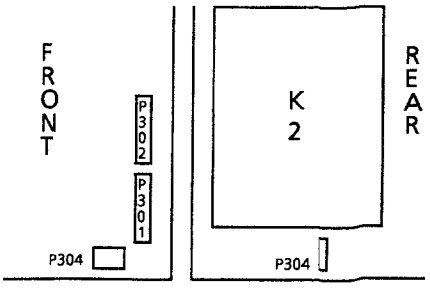
5 Removing the Servo P.C.B

(1) Remove the top cover.

(2) Remove the 4 screws fixing the circuit board.

(3) Remove the connectors (P201, P301,P302,P401,P501,P901).

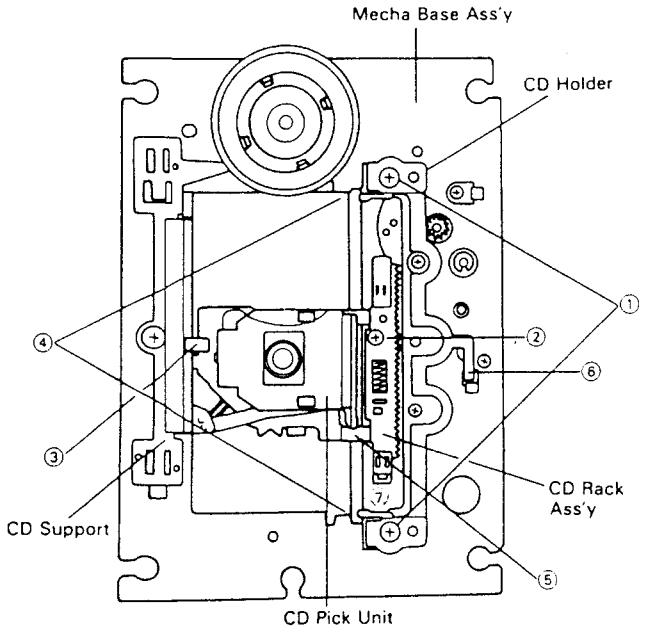
※ Remove the 2 wires of P301 and P302 to check the pattern of the servo P.C.B. and connect a long wire (on hand) between P304 on the servo P.C.B. and P304 on the audio P.C.B. to check the operation.



(Fig-A)

6. Removing the Laser Pickup

(1) Remove the top cover, tray assembly and the clamp.
(2) Move the Pickup Unit from rest position to the center pushing ⑤ point with finger.
(3) Remove the screw ② from the CD RACK assembly, and remove the CD RACK assembly.
(4) Remove the screw① from the mechanical base assembly.
(5) Remove the CD HOLDER fastening the shaft from the mechanical base assembly.(Release the hook ⑥)
(6) Remove the CD Pick Unit with the shaft.

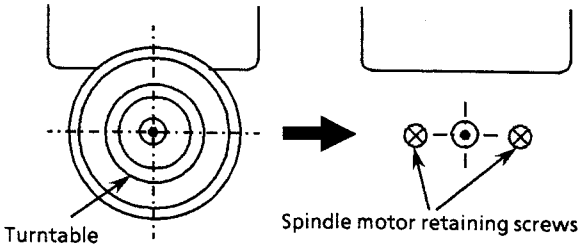


7. Laser Pickup installation

(1) Connect two wires with the connectors of P.C.Board.
(2) While installing the ③ in the CD Support, set the shaft on the base hook④.
(3) Install the CD Holder.
(4) Install THE CD Rack assembly in CD Pick Unit.
1) Fit end ⑦
2) Fix screw ②.

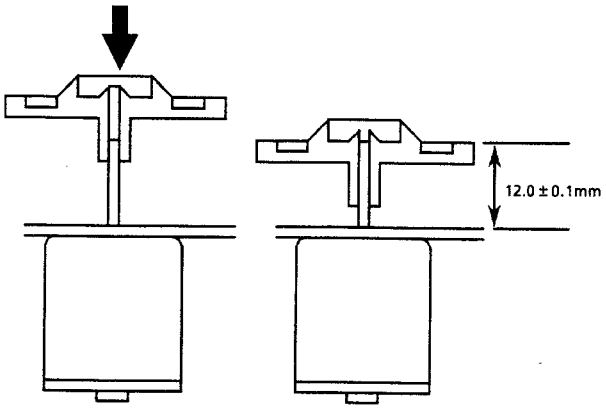
8. Spindle motor removal

(1) Remove the Mechanism assembly.
(2) Remove the turntable, and remove the two screws retaining the spindle motor.
(3) Remove the screw retaining the Spindle andFeed Motor P.C. Board and unsolder it.

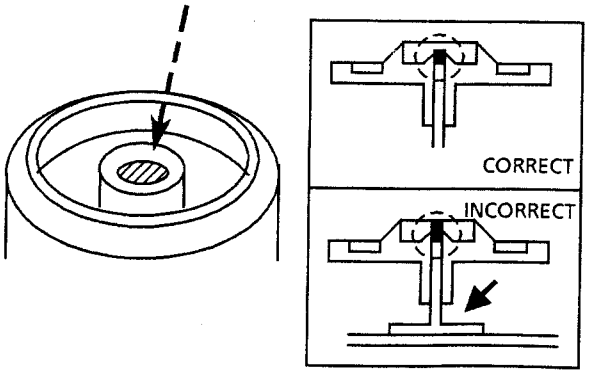


9. Spindle motor installation

(1) Tighten the 2 screws to the same torque.
(2) Fasten the Spindle and Feed Motor P.C. Board with the screw and solder.
(3) Install the turntable.When installing, press straight down at the center of the turntable until the distance from the surface of the mechanism base to the top of the turntable is exactly 12.0 ± 0.1mm.

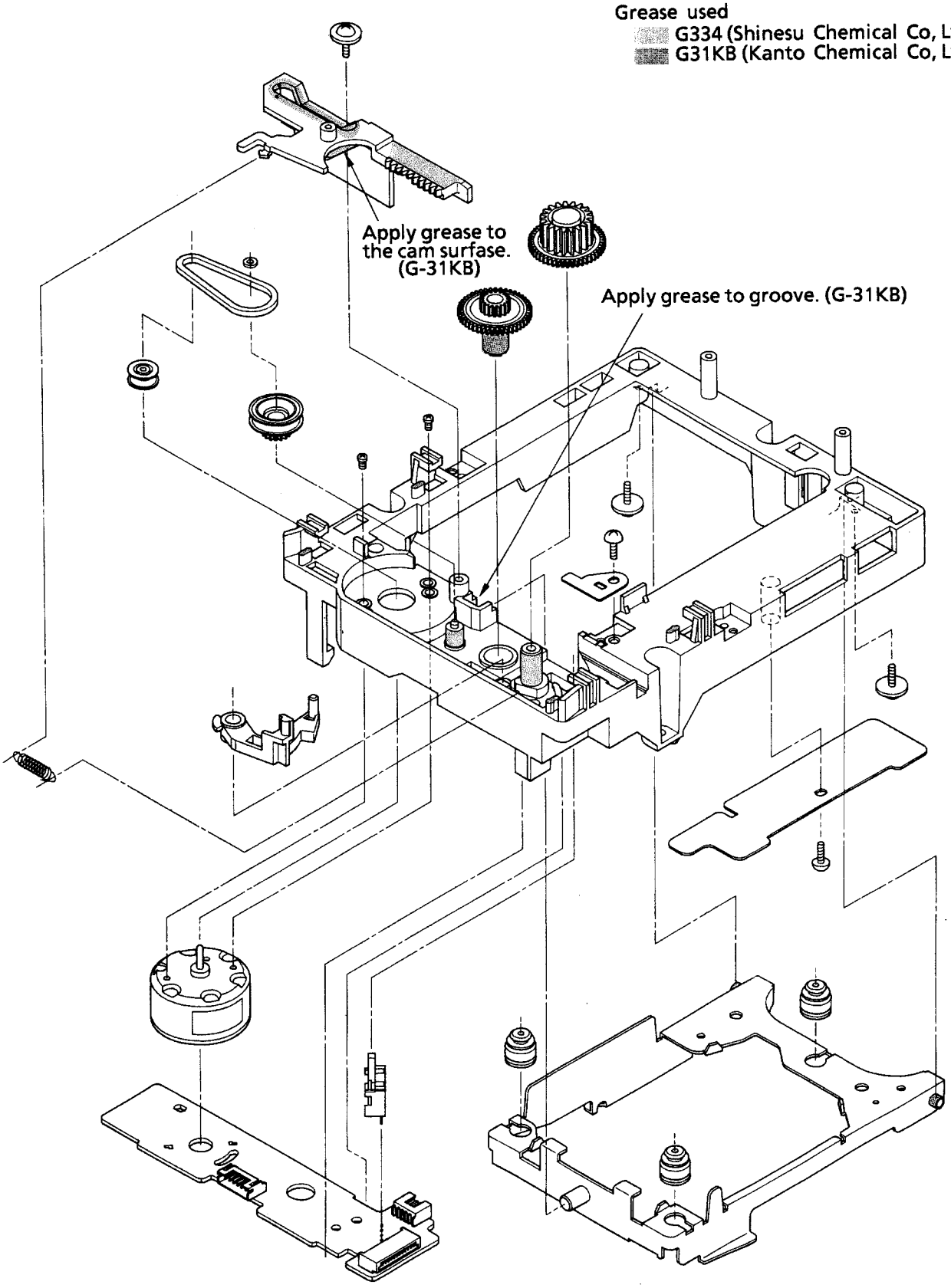


(4) After insertion is complete, bond the motor shaft and turntable together (at the section marked by an arrow in the figure on the left below).



(5) Use "LOCKTITE" #460 bonding agent, and apply as little as possible. Take care not to allow any excess bonding agent to get onto the turntable. Be extremely careful not to allow bonding agent to adhere to the motor bearings (the section marked by an allow in the figure on the right.)

Application Points for Grease


Grease used
G334 (Shinesu Chemical Co, Ltd.)
G31KB (Kanto Chemical Co, Ltd.)
Apply grease to the cam surfase. (G-31KB)
Apply grease to groove. (G-31KB)

Grease part numbers

G334: EBS0006-009B
G31KB: EBS0006-013B

Maintenance of Laser Pickup

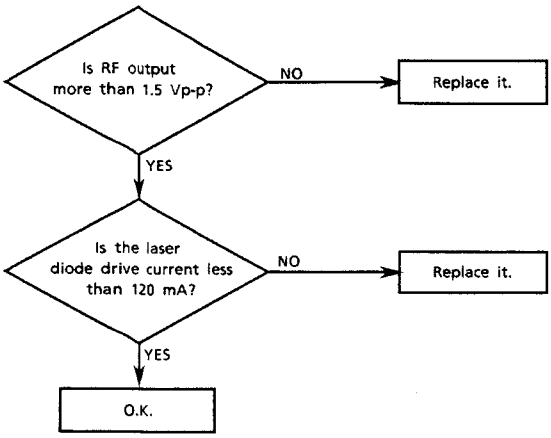
1. Life of the laser diode

When the life of the laser diode has expired, the following symptoms will appear.

(1) The level of RF output (EFM output: amplitude of eye pattern) will be low.

(2) The drive current required by the laser diode will be increased.

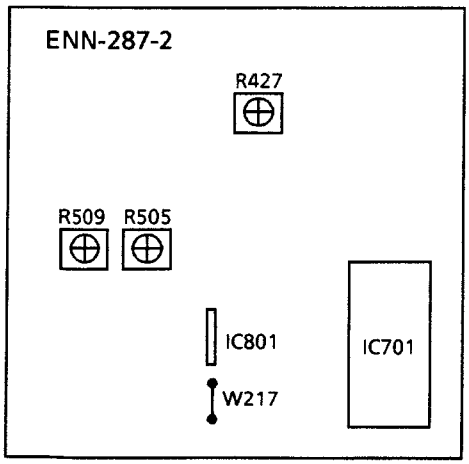
In such a case, check the life of the laser diode following the flowchart below



2. Measurement of laser diode drive current

Replace the jump wire (W217) shown below with the resistor (1Ω).

Measure the voltage across the resistor with a milli-voltmeter. When the voltage is more than 120mV, it shows that the life of the laser diode has expired



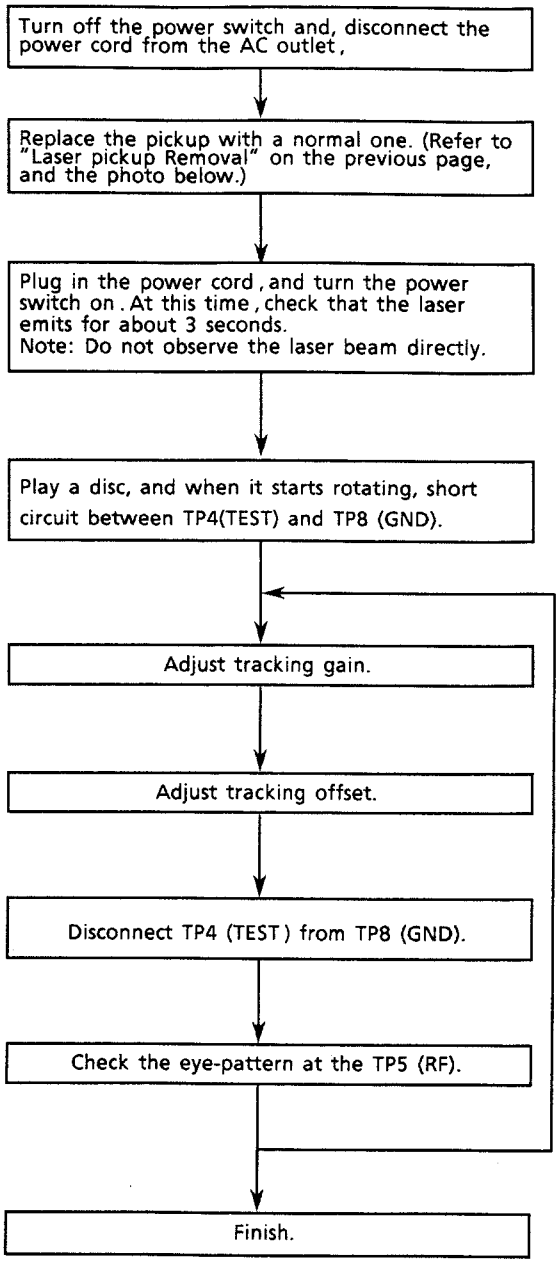
3. Semi-fixed resistor on the APC PC board

The semi-fixed resistor on the APC printed circuit board which is attached to the pickup is used to adjust the laser power. Since this adjustment should be performed to match the characteristics of the whole optical block, do not touch the semi-fixed resistor.

If the laser power is lower than the specified value, the laser diode is almost worn out, and the laser pickup should be replaced.

If the semi-fixed resistor is adjusted while the pickup is functioning normally, the laser pickup may be damaged due to excessive current.

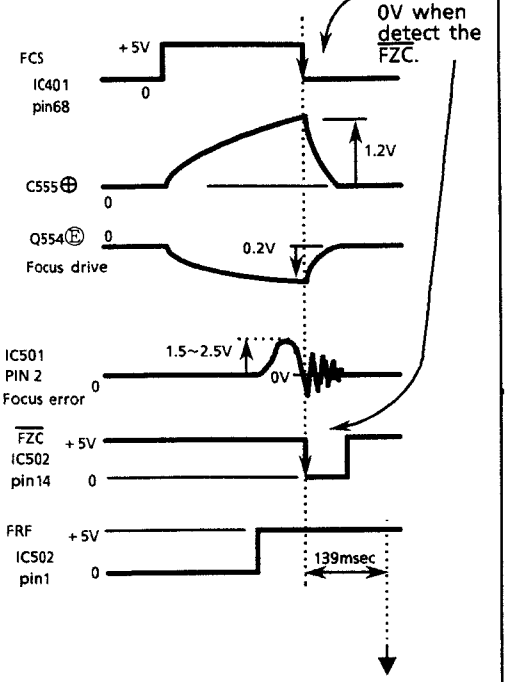
Replacement of Laser Pickup


Turn off the power switch and, disconnect the power cord from the AC outlet,
Replace the pickup with a normal one. (Refer to "Laser pickup Removal" on the previous page, and the photo below.)
Plug in the power cord, and turn the power switch on. At this time, check that the laser emits for about 3 seconds.
Note: Do not observe the laser beam directly.
Play a disc, and when it starts rotating, short circuit between TP4(TEST) and TP8 (GND).
Adjust tracking gain.
Adjust tracking offset.
Disconnect TP4 (TEST) from TP8 (GND).
Check the eye-pattern at the TP5 (RF).
Finish.

Note: Since one adjustment may affect other settings, repeat these adjustments a few times.

Flow of Functional Operation Until TOC is Read

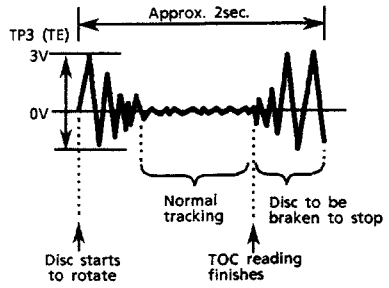
■ **Time Chart of focusing**



- When the lens moves up and down in a 2-seconds interval, FZC is not output.
- When the lens moves up and down in less than 1-second, FRF is not output or the focus servo loop is abnormal.

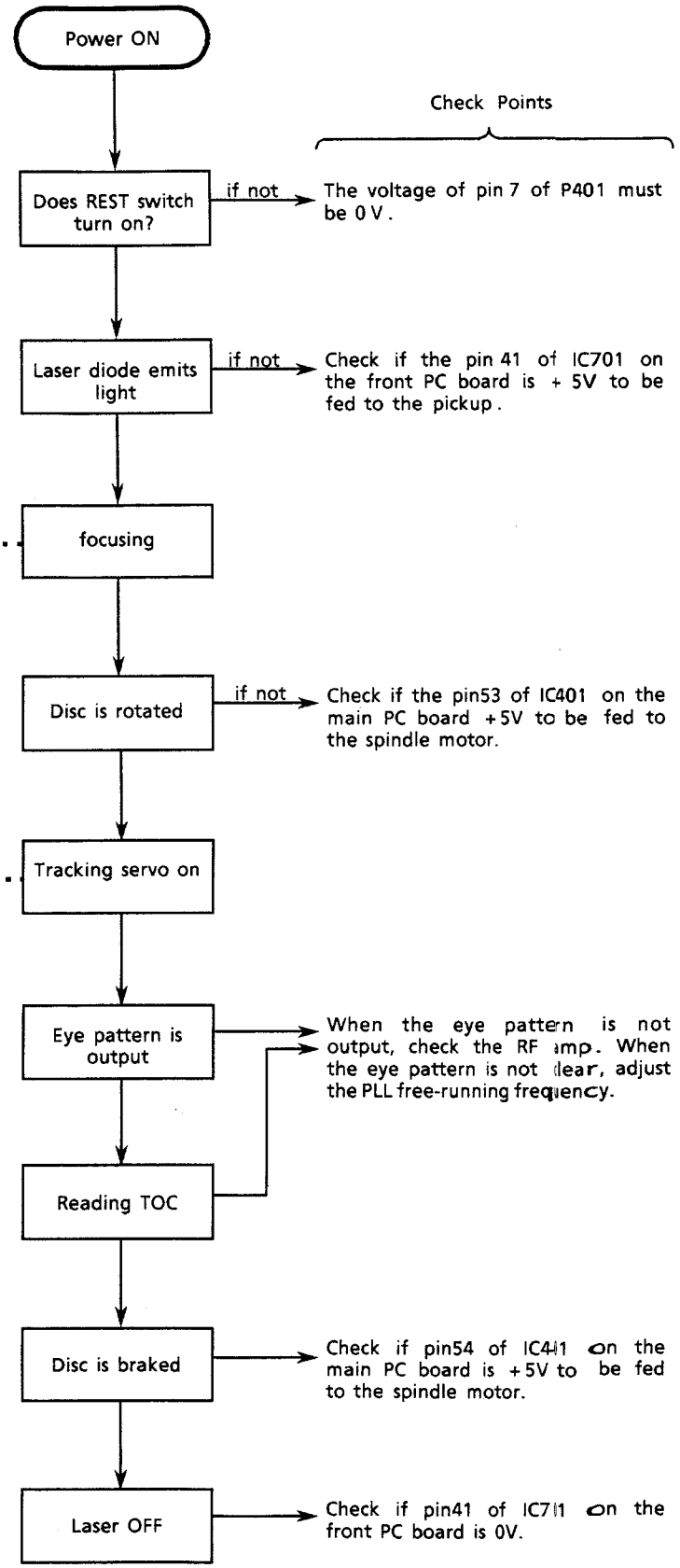
Fig-1

■ **Tracking error waveform at TOC reading**

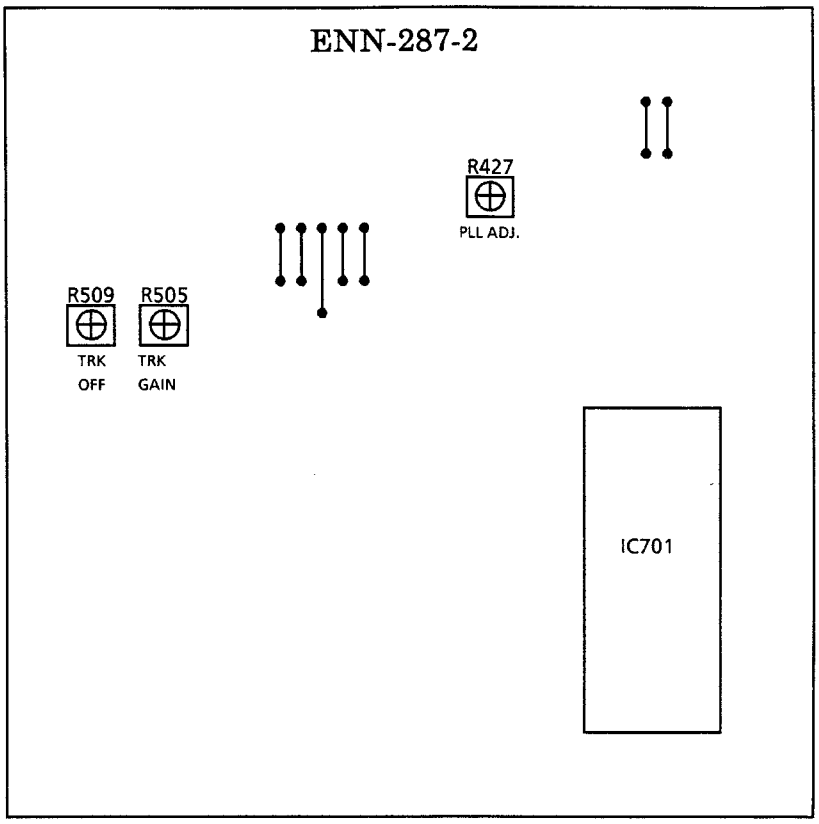


■ **When the tracking loop does not turn ON, check the tracking offset and align it to 0.**

Fig-2


Power ON
Check Points
Does REST switch turn on?
if not
The voltage of pin 7 of P401 must be 0 V.
Laser diode emits light
if not
Check if the pin 41 of IC701 on the front PC board is + 5V to be fed to the pickup.
focusing
Disc is rotated
if not
Check if the pin53 of IC401 on the main PC board +5V to be fed to the spindle motor.
Tracking servo on
Eye pattern is output
When the eye pattern is not output, check the RF amp. When the eye pattern is not clear, adjust the PLL free-running frequency.
Reading TOC
Disc is braked
Check if pin54 of IC401 on the main PC board is +5V to be fed to the spindle motor.
Laser OFF
Check if pin41 of IC701 on the front PC board is 0V.

Adjustment Procedures



1. PLL free-running adjustment

1) Measuring instrument
   Frequency counter
2) Adjusting procedure
   (1) Connect a frequency counter with TP7 (CK) and TP8 (GND) on the main PC board .
   (2) Adjust R427 for setting the frequency counter's value becomes 4.295 ± 0.005MHz.

2. Tracking gain adjustment

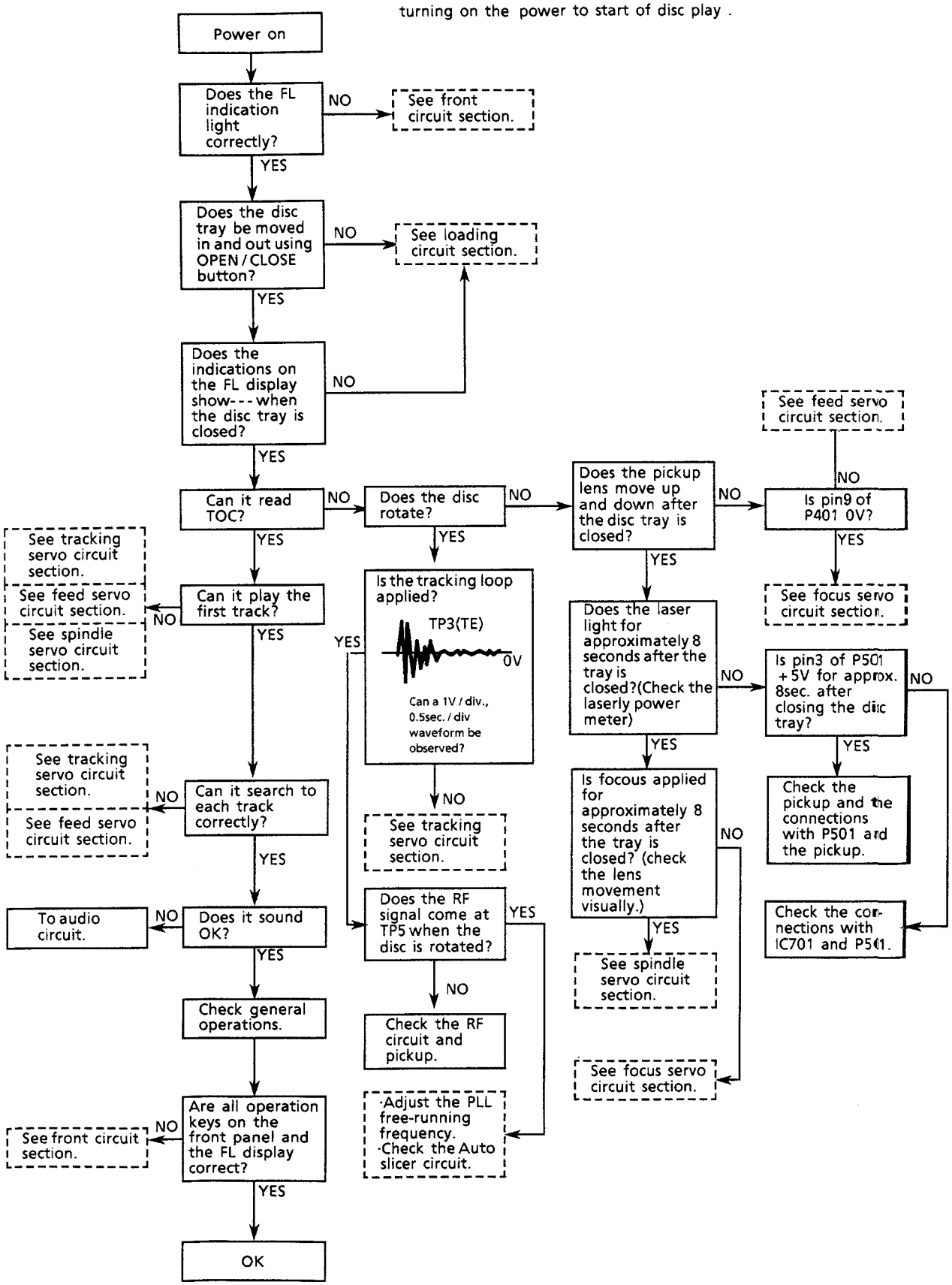
1) Measuring instruments
   Oscilloscope, Normal disc
2) Adjusting procedure
   (1) Connect an oscilloscope with TP3 (TE) and TP1 (GND) on the main PC board.
   (2) Play a disc.
   (3) Short circuit TP4 (TEST) to TP1 (GND).
   (4) Adjust R505 for setting tracking error signal becomes 2.0 $V_{p\text{-}p}$.

3. Tracking offset adjustment

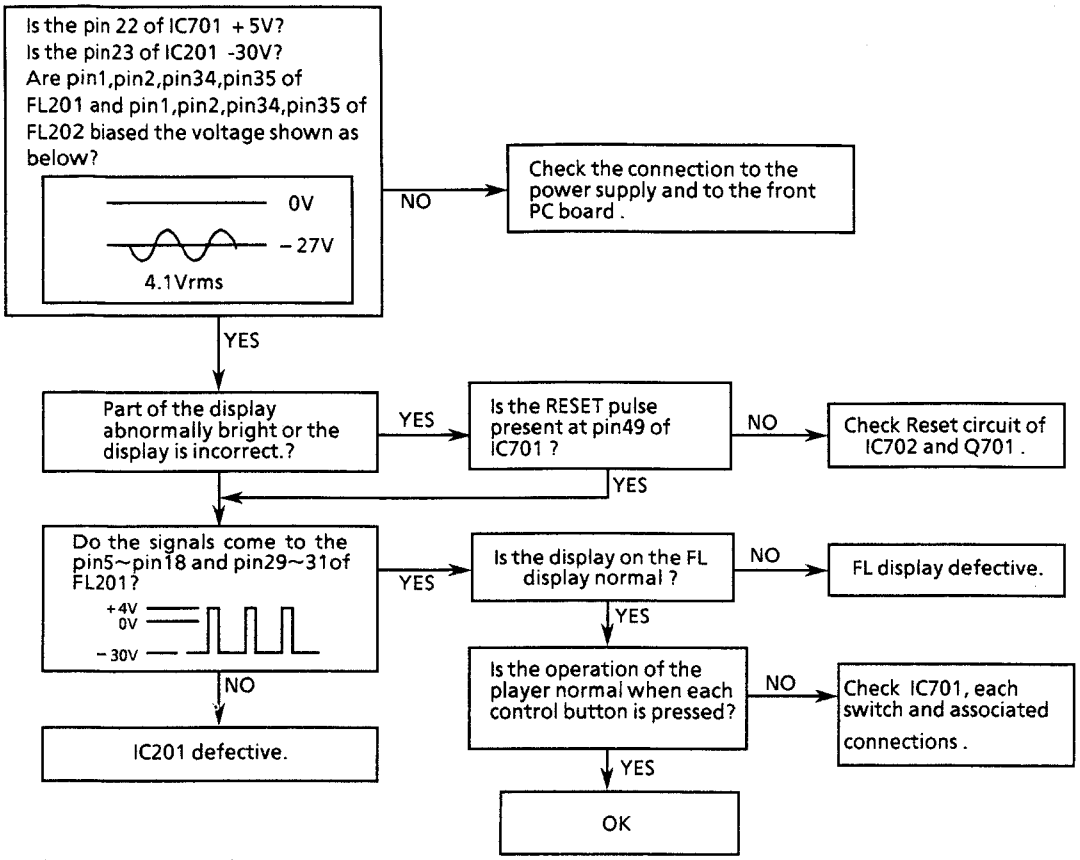
1) Measuring instruments
   Oscilloscope, Normal disc
2) Adjusting procedure
   (1) Connect an oscilloscope with TP3 (TE) and TP1 (GND) on the main PC board.
   (2) Play a disc.
   (3) Short circuit TP4 (TEST) to TP1 (GND).
   (4) Adjust R509 for setting the DC level of the tracking error (off set) becomes 0.

Troubleshooting

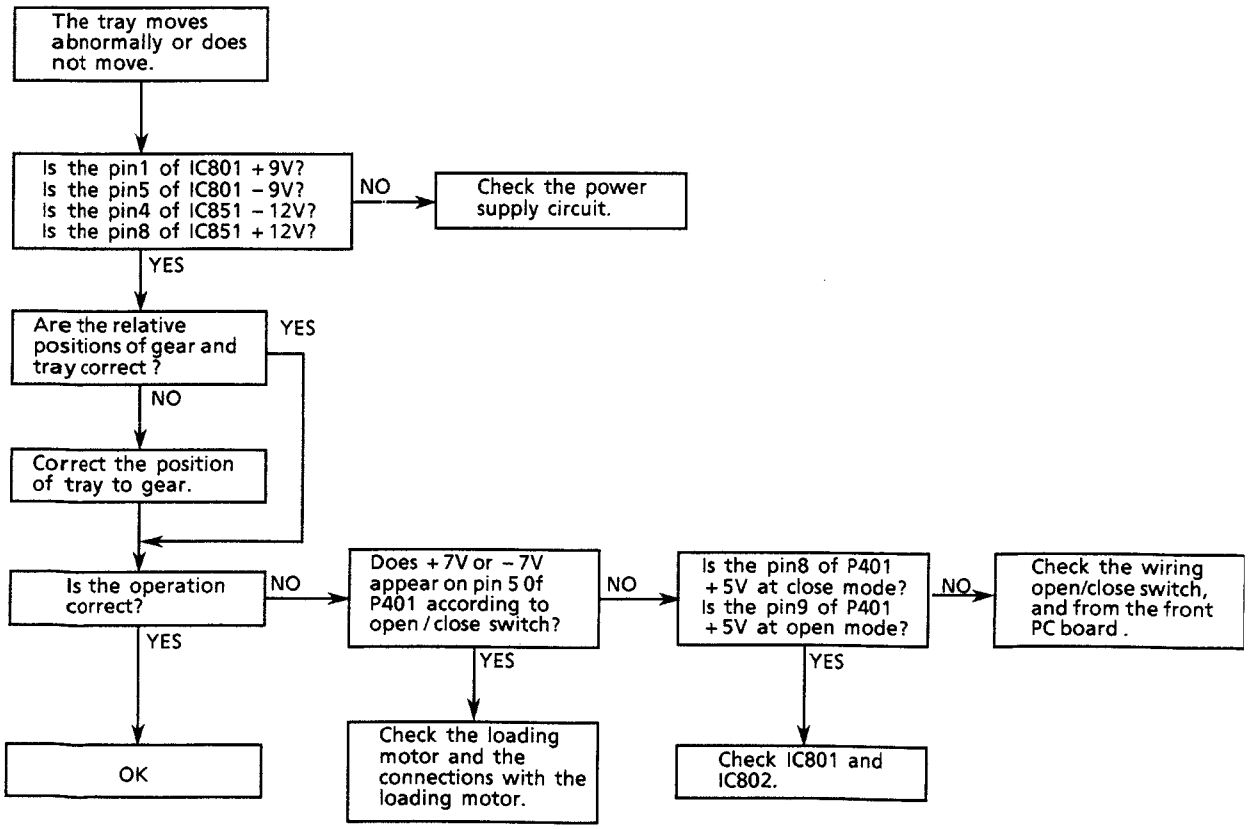
The following shows the status of the various circuits from turning on the power to start of disc play .


Power on
Does the FL indication light correctly?
NO
See front circuit section.
YES
Does the disc tray be moved in and out using OPEN / CLOSE button?
NO
See loading circuit section.
YES
Does the indications on the FL display show- - - when the disc tray is closed?
NO
YES
Can it read TOC?
NO
Does the disc rotate?
NO
Does the pickup lens move up and down after the disc tray is closed?
NO
See feed servo circuit section.
NO
Is pin9 of P401 0V?
YES
See focus servo circuit section.
YES
YES
YES
Can it play the first track?
NO
See tracking servo circuit section.
See feed servo circuit section.
See spindle servo circuit section.
YES
Is the tracking loop applied?
TP3(TE)
0V
Can a 1V / div., 0.5sec. / div waveform be observed?
YES
NO
See tracking servo circuit section.
Does the laser light for approximately 8 seconds after the tray is closed?(Check the laserly power meter)
NO
Is pin3 of P501 +5V for approx. 8sec. after closing the disc tray?
NO
YES
YES
Check the pickup and the connections with P501 and the pickup.
Check the connections with IC701 and P501.
Can it search to each track correctly?
NO
See tracking servo circuit section.
See feed servo circuit section.
YES
Is focous applied for approximately 8 seconds after the tray is closed? (check the lens movement visually.)
NO
YES
See spindle servo circuit section.
See focus servo circuit section.
To audio circuit.
NO
Does it sound OK?
YES
Does the RF signal come at TP5 when the disc is rotated?
YES
NO
Check the RF circuit and pickup.
·Adjust the PLL free-running frequency.
·Check the Auto slicer circuit.
YES
Check general operations.
Are all operation keys on the front panel and the FL display correct?
NO
See front circuit section.
YES
OK

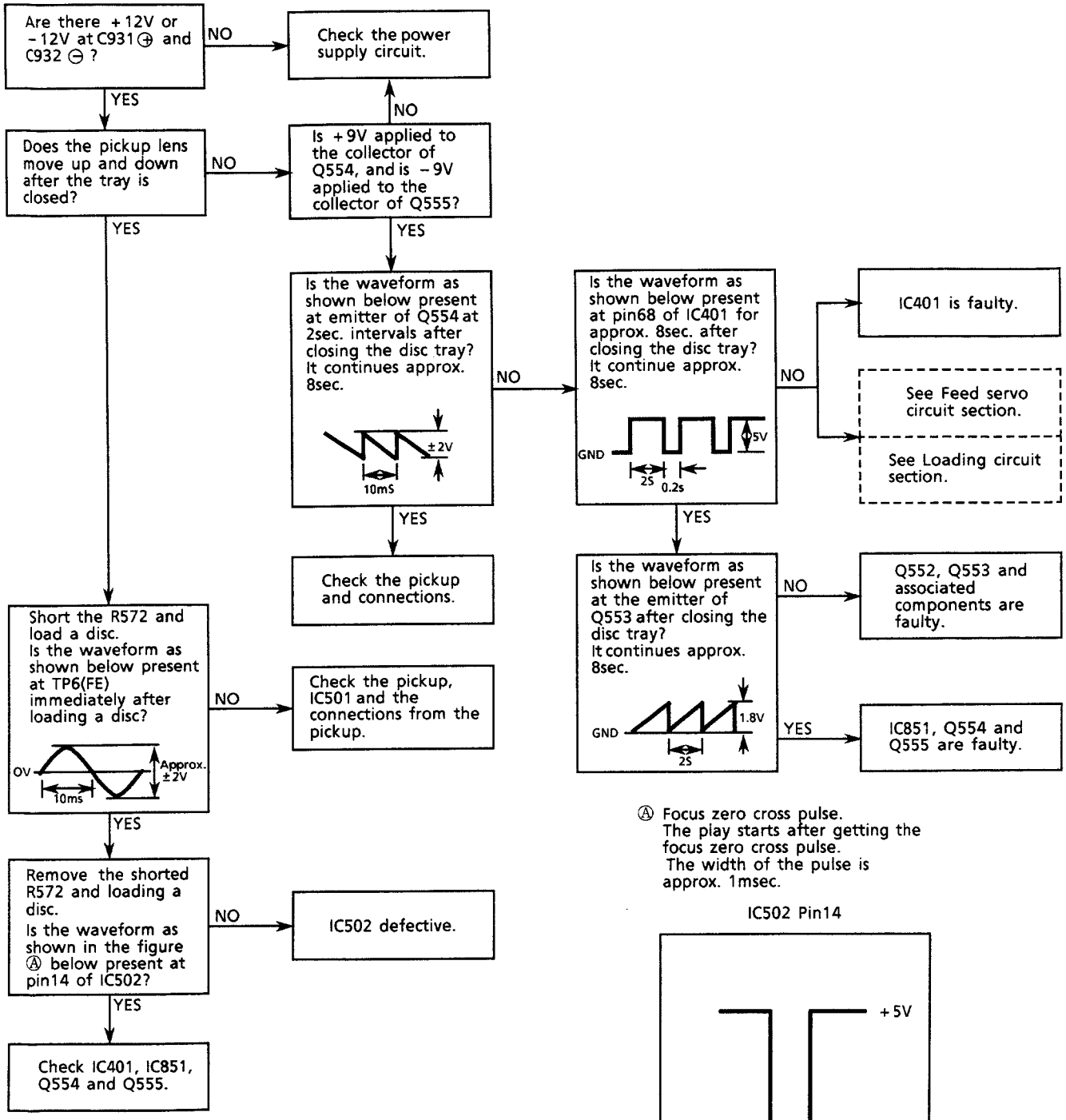
Front circuit Section


Is the pin 22 of IC701 + 5V?
Is the pin23 of IC201 -30V?
Are pin1,pin2,pin34,pin35 of FL201 and pin1,pin2,pin34,pin35 of FL202 biased the voltage shown as below?
0V
– 27V
4.1Vrms
NO
Check the connection to the power supply and to the front PC board .
YES
Part of the display abnormally bright or the display is incorrect.?
YES
Is the RESET pulse present at pin49 of IC701 ?
NO
Check Reset circuit of IC702 and Q701 .
YES
Do the signals come to the pin5~pin18 and pin29~31of FL201?
+4V
0V
– 30V
YES
Is the display on the FL display normal ?
NO
FL display defective.
YES
Is the operation of the player normal when each control button is pressed?
NO
Check IC701, each switch and associated connections .
YES
OK
NO
IC201 defective.

Loading circuit section

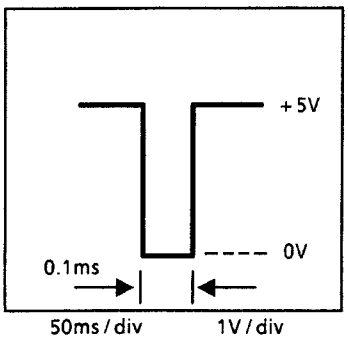

The tray moves abnormally or does not move.
Is the pin1 of IC801 + 9V?
Is the pin5 of IC801 – 9V?
Is the pin4 of IC851 – 12V?
Is the pin8 of IC851 + 12V?
NO
Check the power supply circuit.
YES
Are the relative positions of gear and tray correct ?
YES
NO
Correct the position of tray to gear.
Is the operation correct?
NO
Does + 7V or – 7V appear on pin 5 0f P401 according to open / close switch?
NO
Is the pin8 of P401 + 5V at close mode? Is the pin9 of P401 + 5V at open mode?
NO
Check the wiring open/close switch, and from the front PC board .
YES
YES
YES
OK
Check the loading motor and the connections with the loading motor.
Check IC801 and IC802.

Focus circuit section

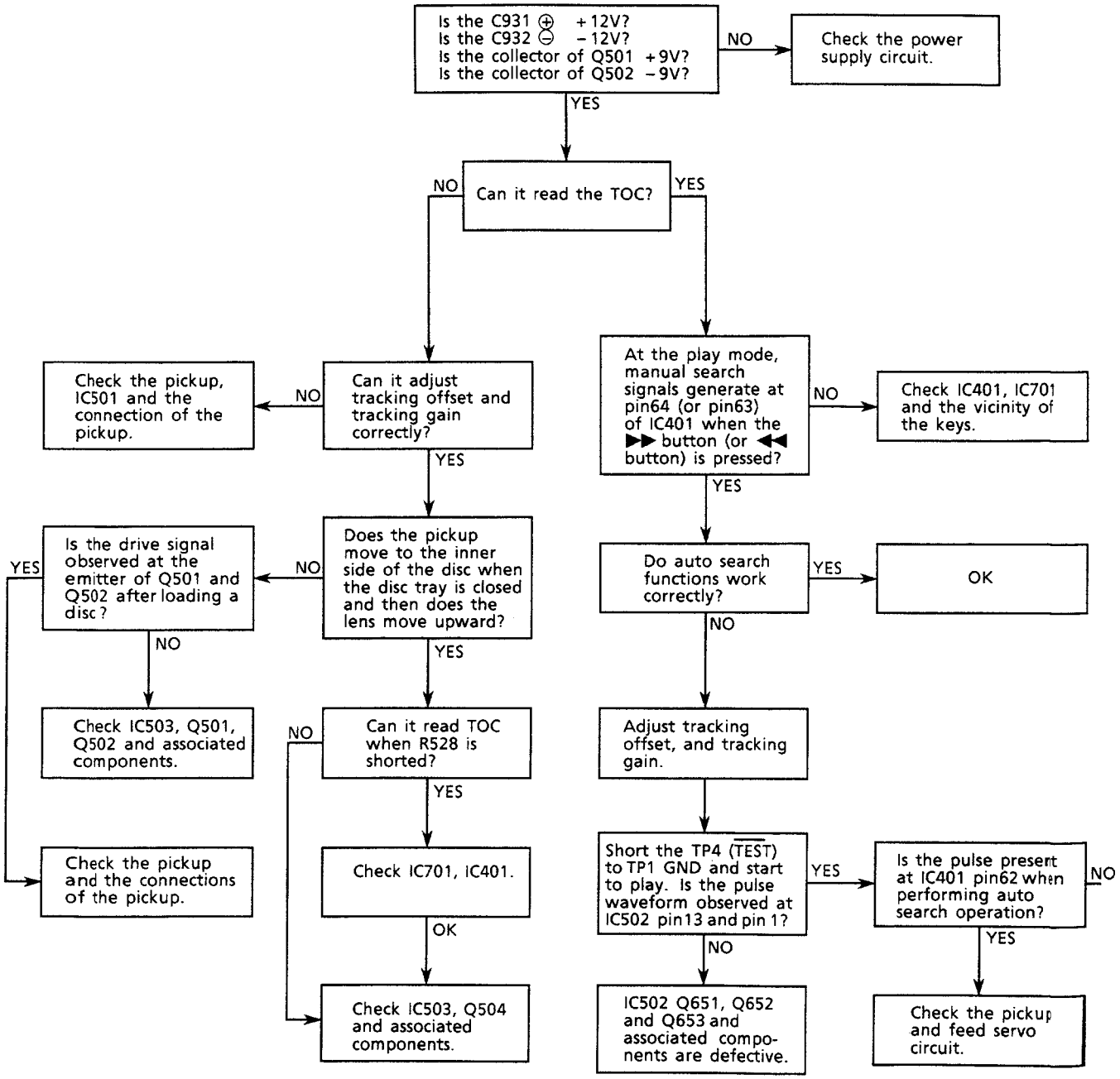

Are there +12V or -12V at C931 ⊕ and C932 ⊖ ?
NO
Check the power supply circuit.
YES
NO
Does the pickup lens move up and down after the tray is closed?
NO
Is +9V applied to the collector of Q554, and is -9V applied to the collector of Q555?
YES
YES
Is the waveform as shown below present at emitter of Q554 at 2sec. intervals after closing the disc tray? It continues approx. 8sec.
±2V
10mS
NO
Is the waveform as shown below present at pin68 of IC401 for approx. 8sec. after closing the disc tray? It continue approx. 8sec.
GND
5V
2S
0.2s
NO
IC401 is faulty.
See Feed servo circuit section.
See Loading circuit section.
YES
YES
Check the pickup and connections.
Short the R572 and load a disc. Is the waveform as shown below present at TP6(FE) immediately after loading a disc?
OV
Approx. ±2V
10ms
NO
Check the pickup, IC501 and the connections from the pickup.
Is the waveform as shown below present at the emitter of Q553 after closing the disc tray? It continues approx. 8sec.
GND
1.8V
2S
NO
Q552, Q553 and associated components are faulty.
YES
IC851, Q554 and Q555 are faulty.
YES
Remove the shorted R572 and loading a disc. Is the waveform as shown in the figure Ⓐ below present at pin14 of IC502?
NO
IC502 defective.
YES
Check IC401, IC851, Q554 and Q555.

Ⓐ Focus zero cross pulse.
The play starts after getting the focus zero cross pulse.
The width of the pulse is approx. 1msec.

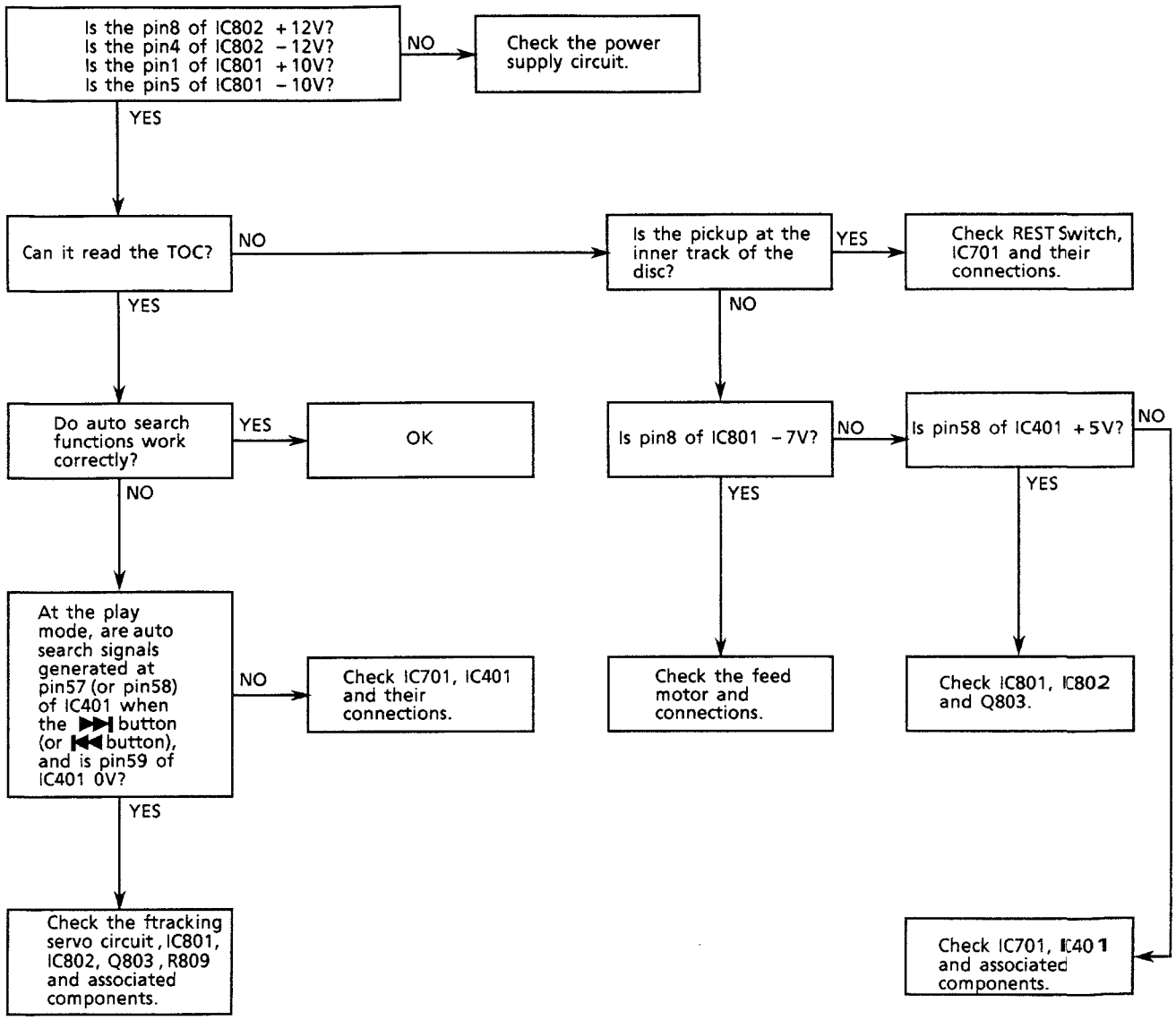
IC502 Pin14



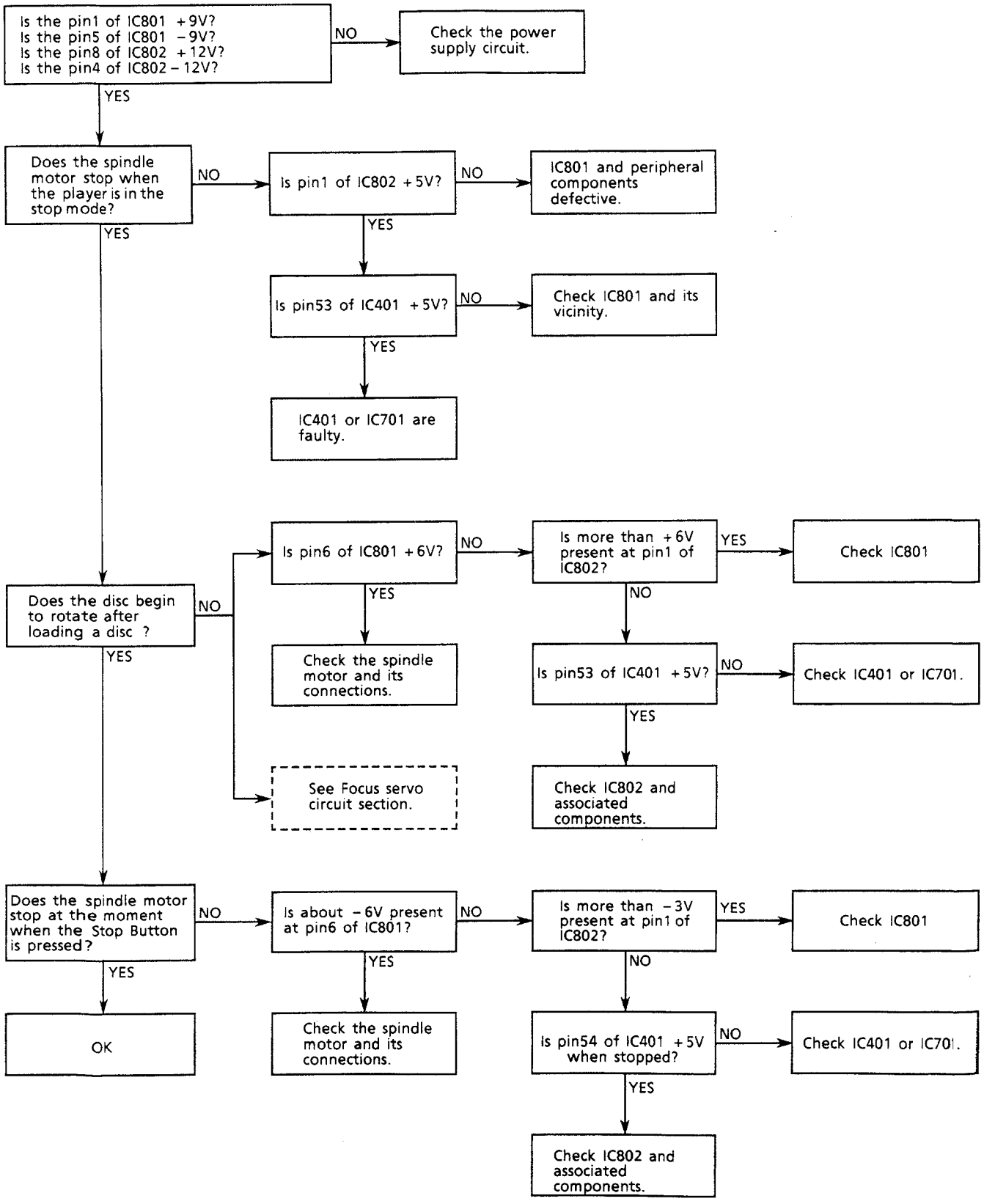
Tracking circuit section


Is the C931 ⊕ +12V?
Is the C932 ⊖ −12V?
Is the collector of Q501 +9V?
Is the collector of Q502 −9V?
NO
Check the power supply circuit.
YES
NO
Can it read the TOC?
YES
Check the pickup, IC501 and the connection of the pickup.
NO
Can it adjust tracking offset and tracking gain correctly?
YES
At the play mode, manual search signals generate at pin64 (or pin63) of IC401 when the ▶▶ button (or ◀◀ button) is pressed?
NO
Check IC401, IC701 and the vicinity of the keys.
YES
YES
Is the drive signal observed at the emitter of Q501 and Q502 after loading a disc?
NO
Does the pickup move to the inner side of the disc when the disc tray is closed and then does the lens move upward?
Do auto search functions work correctly?
YES
OK
NO
NO
YES
YES
NO
Check IC503, Q501, Q502 and associated components.
NO
Can it read TOC when R528 is shorted?
Adjust tracking offset, and tracking gain.
YES
Short the TP4 (TEST) to TP1 GND and start to play. Is the pulse waveform observed at IC502 pin13 and pin 1?
YES
Is the pulse present at IC401 pin62 when performing auto search operation?
NO
Check the pickup and the connections of the pickup.
Check IC701, IC401.
NO
YES
OK
NO
YES
Check IC503, Q504 and associated components.
IC502 Q651, Q652 and Q653 and associated components are defective.
Check the pickup and feed servo circuit.

Feed circuit section


Is the pin8 of IC802 +12V?
Is the pin4 of IC802 −12V?
Is the pin1 of IC801 +10V?
Is the pin5 of IC801 −10V?
NO
Check the power supply circuit.
YES
Can it read the TOC?
NO
Is the pickup at the inner track of the disc?
YES
Check REST Switch, IC701 and their connections.
NO
YES
Do auto search functions work correctly?
YES
OK
NO
Is pin8 of IC801 −7V?
NO
Is pin58 of IC401 +5V?
NO
YES
YES
At the play mode, are auto search signals generated at pin57 (or pin58) of IC401 when the ▶▶| button (or |◀◀ button), and is pin59 of IC401 0V?
NO
Check IC701, IC401 and their connections.
Check the feed motor and connections.
Check IC801, IC802 and Q803.
YES
Check the ftracking servo circuit, IC801, IC802, Q803, R809 and associated components.
Check IC701, IC401 and associated components.

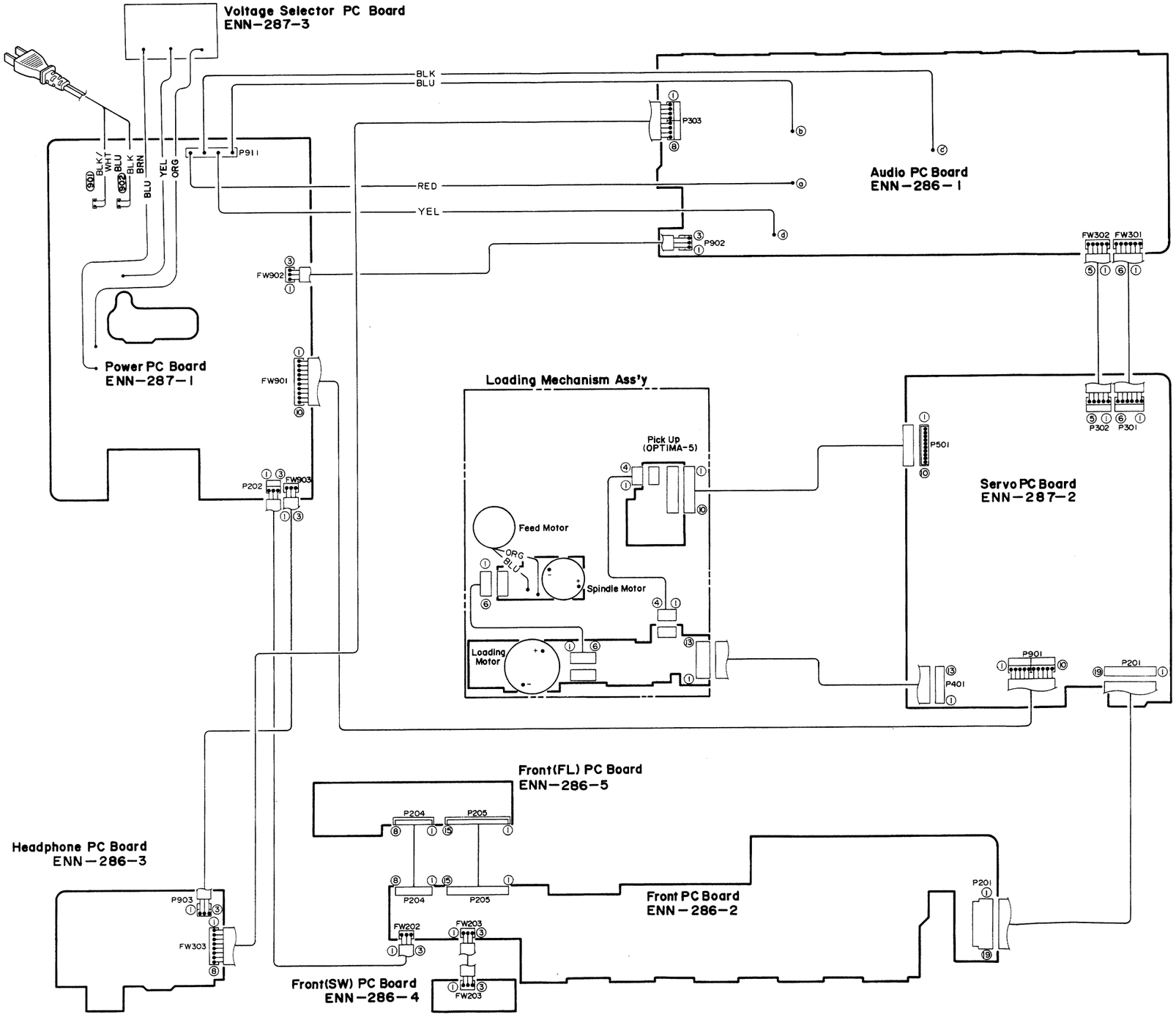
Spindle circuit section



— MEMO —

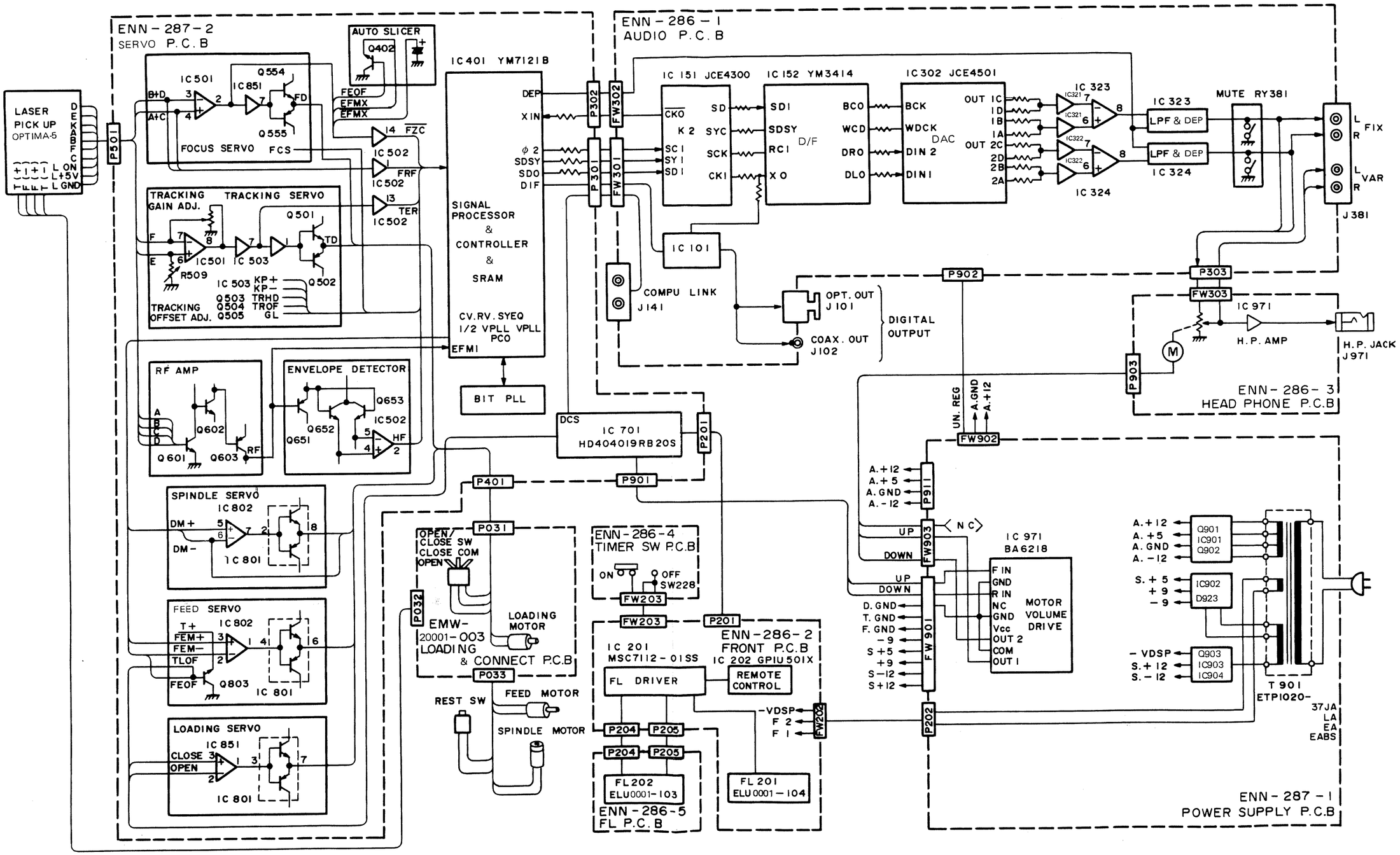
— MEMO —

Connection Diagram



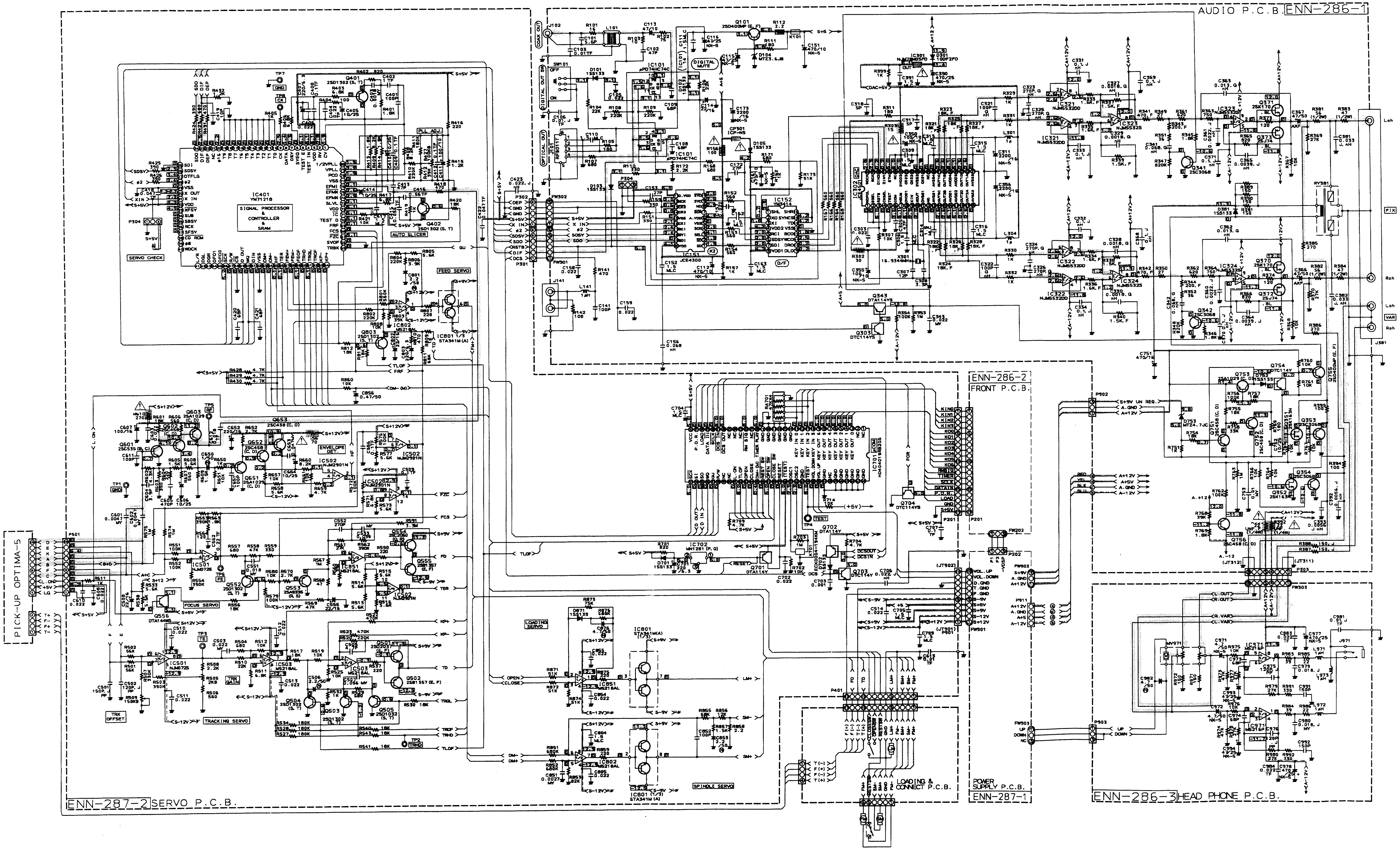
(No.20274)

Block Diagram

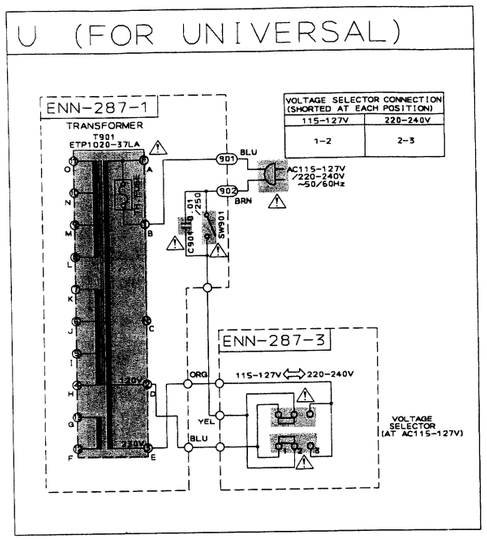


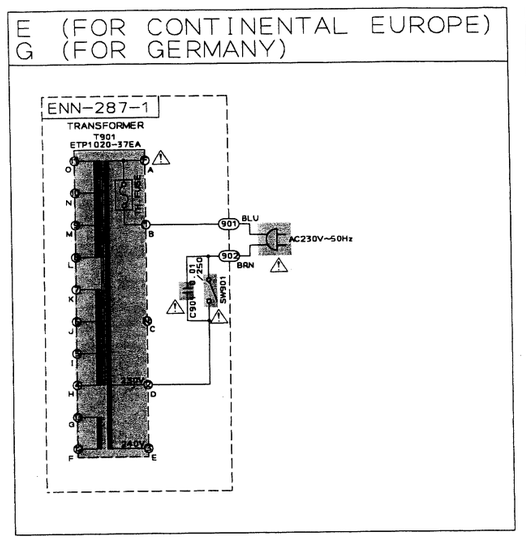
Schematic Diagram

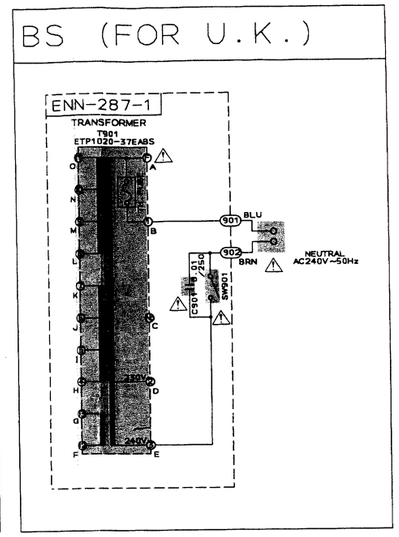
(1) Servo & Audio Section

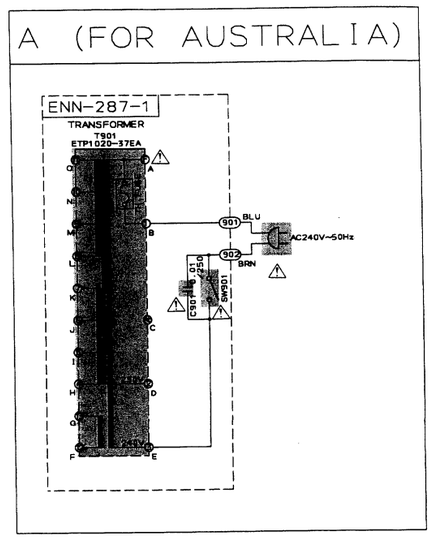

AUDIO P.C.B. ENN-286-1
ENN-286-2 FRONT P.C.B.
ENN-287-2 SERVO P.C.B.
ENN-286-3 HEAD PHONE P.C.B.
POWER SUPPLY P.C.B. ENN-287-1
LOADING & CONNECT P.C.B.
PICK-UP OPTIMA-5
IC401 YM7121B SIGNAL PROCESSOR & CONTROLLER & SRAM
IC701 μCOM HD404019R820S
FOCUS SERVO
TRACKING SERVO
FEED SERVO
LOADING SERVO
SPINDLE SERVO
SERVO CHECK
AUTO SLICER
PLL ADJ.
ENVELOPE DET.
TRK OFFSET
TRK GAIN
DIGITAL MUTE
COAX OUT
OPTICAL OUT
DIGITAL OUT SW
FIX
VAR

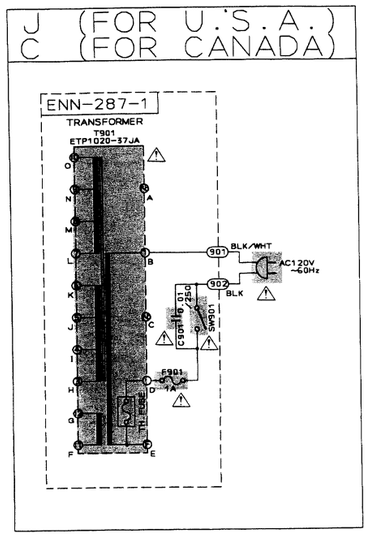
(2) Front & Power Supply Section

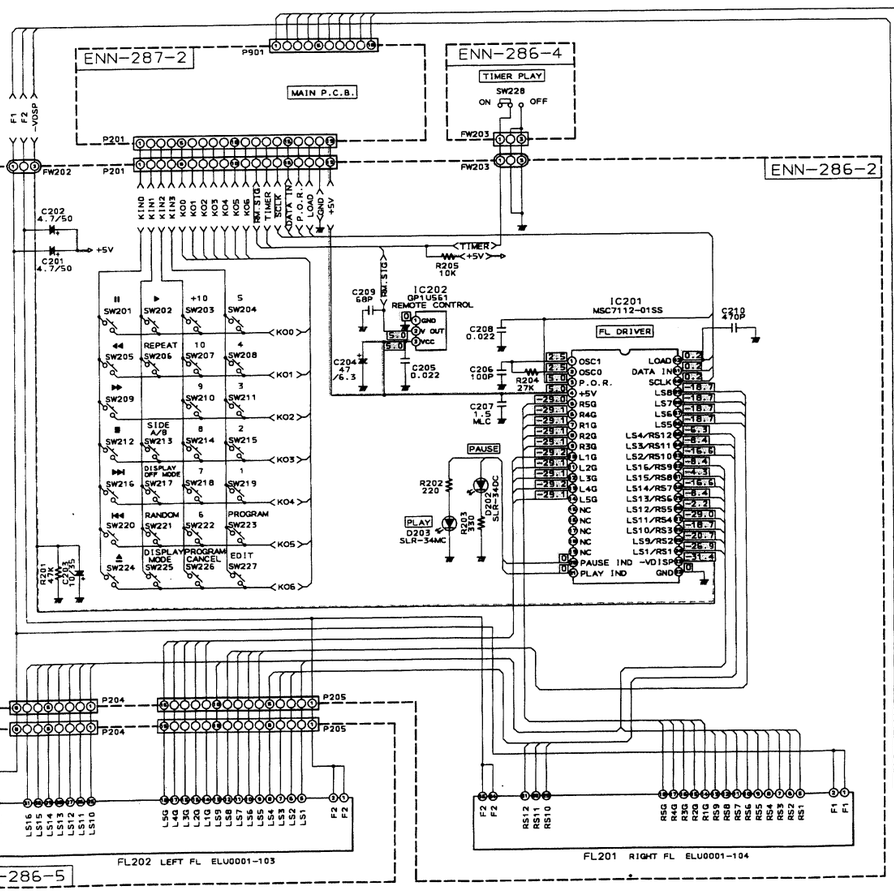


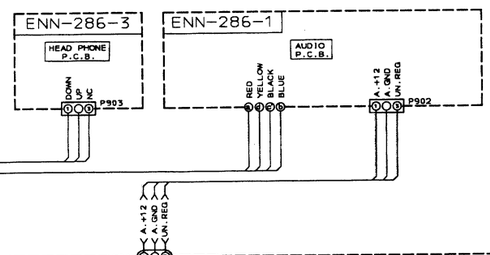


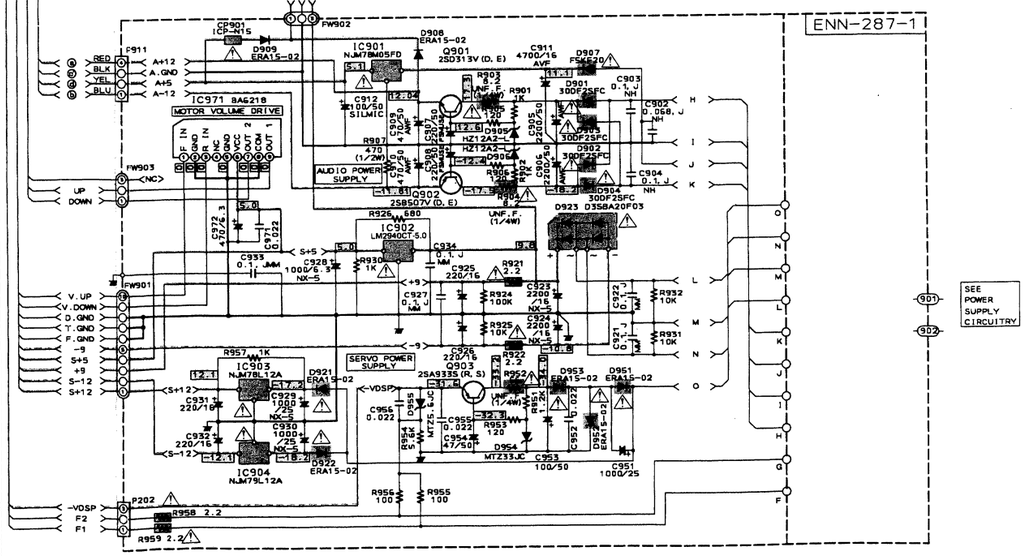










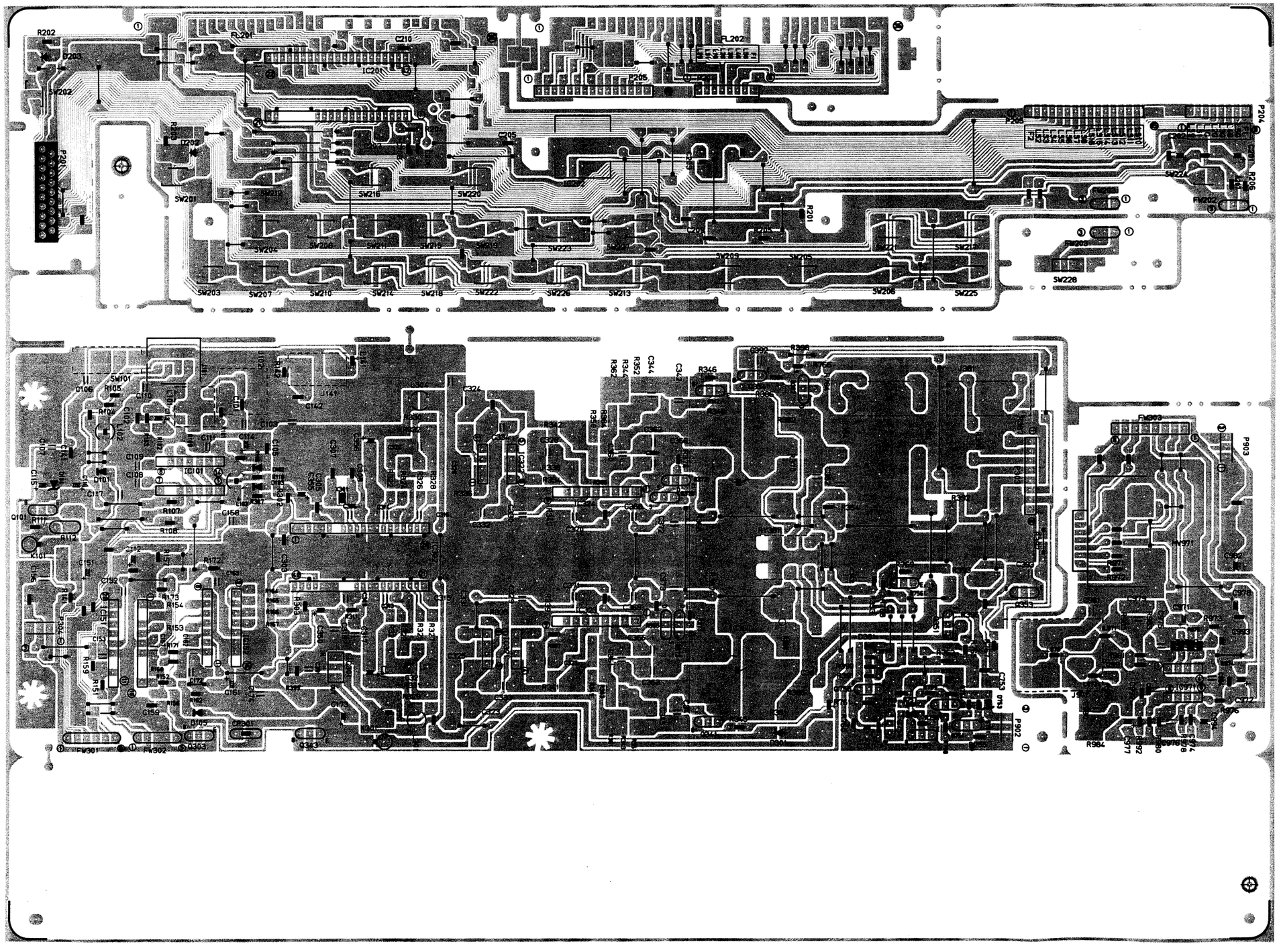


Notes:

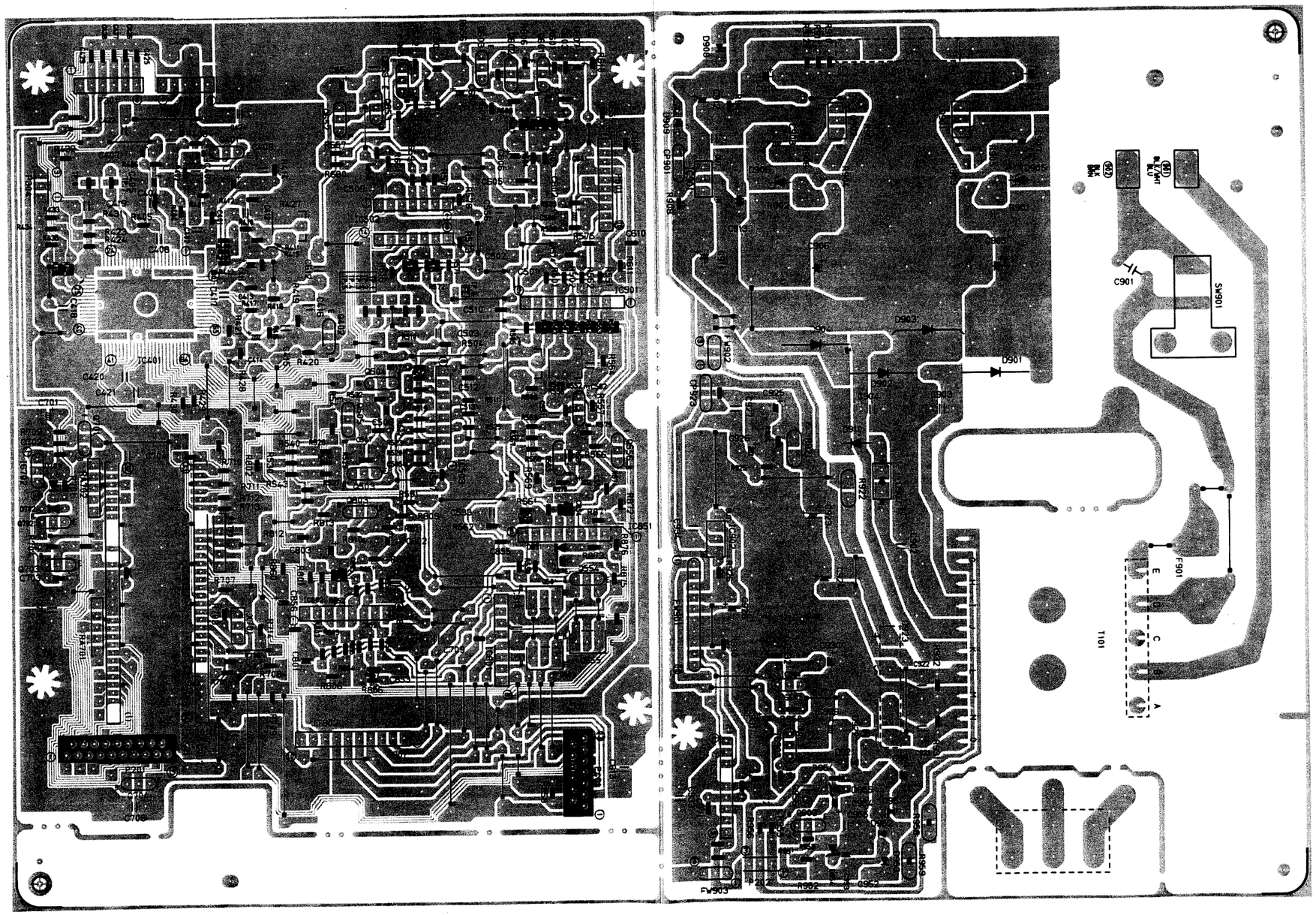
1. ——— indicates +B power supply.
2. - - - - - - indicates – B power supply.
3. indicates signal path.
4. Digital signal path.
5. shows voltage.
6. When replacing the parts in the darkened area ( ) and those marked with ⚠, be sure to use the designated parts to ensure safety.
7. This is the standard circuit diagram.
8. The design and contents are subject to change without notice.

Printed Circuit Boards

(1) AUDIO & FRONT P.C.B (ENN-286)



(2) SERVO & POWER SUPPLY P.C.B (ENN-287)



PARTS LIST

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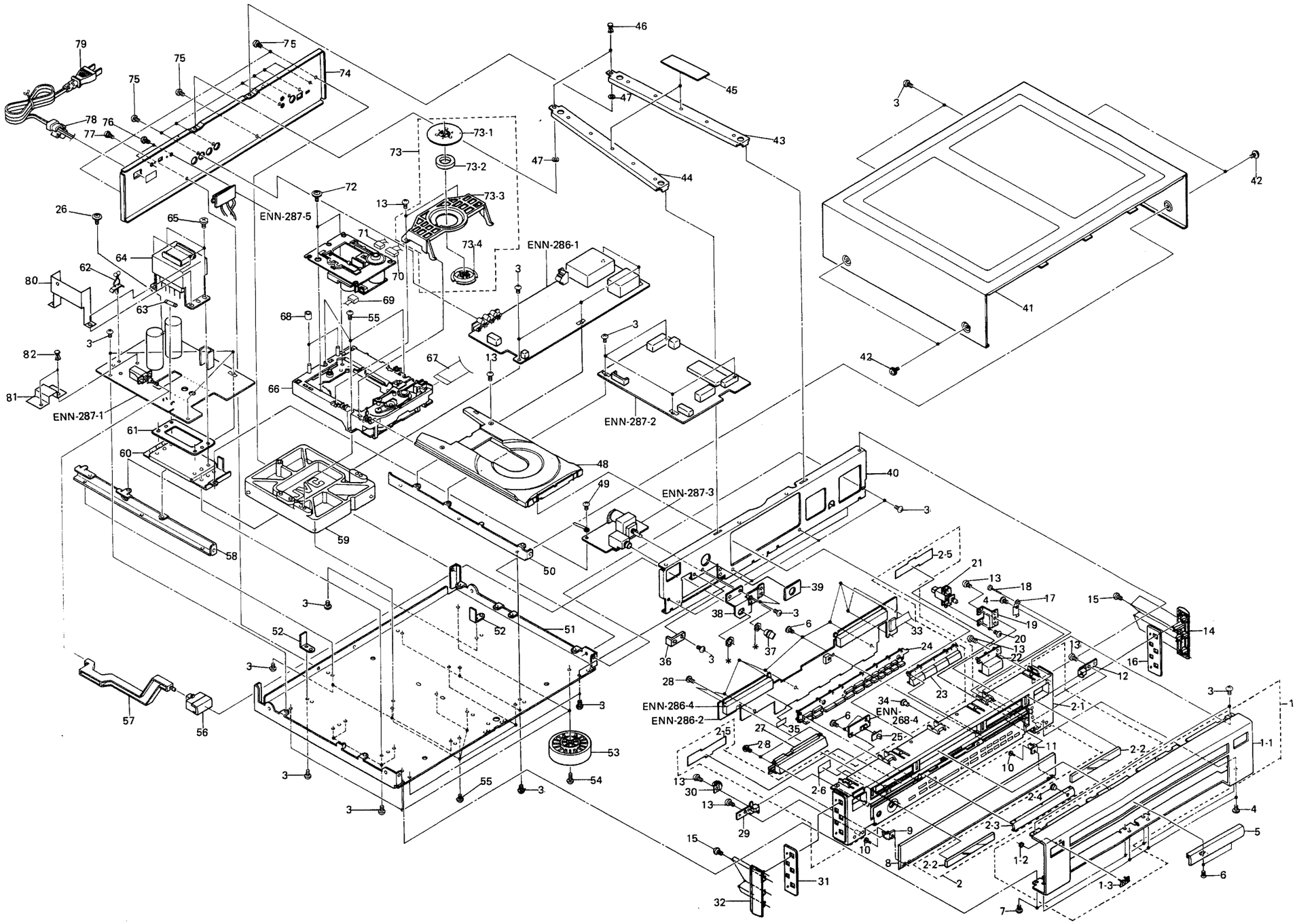
■ ENN-286 [A] Audio & Front PC Board Ass'y 2-13
Accessories List 2-16
Packing Materials and Part Numbers 2-17

General Exploded View and Parts List



* mark indicates attached part.

■ Parts List

⚠	Item	Part Number	Part Name	Q'ty	Description	Areas
	1	EFP-XLZ1050TN(S	Front Panel Ass'y	1		
	1-1	E206826-003	Front Panel	1		
	1-2	E60912-003	Speed Nut	1		
	1-3	E72968-001	JVC Mark	1		
	2	E102335-005SA	Front Base Ass'y	1		
	2-1	E102335-008	Front Base	1		
	2-2	E406117-006	Window Screen	2		
	2-3	E406124-004	Ornament	1		
	2-4	E406138-002	Remocon Screen	1		
	2-5	E406650-002	FL Screen	2		
	2-6	EXO015010H03S	Spacer	1		
	3	SBSG3008CC	Screw	33		
	4	SDSF3008M	Screw	5		
	5	E406119-002	Fitting	1		
	6	SDSF2608Z	Screw	13		
	7	SDSG3008C	Screw	4		
	8	E306930-003	Door	1		
	9	E406132-002	Hinge	1	Left	
	10	SPSP2605M	Screw	2	for Hinge	
	11	E406131-004	Hinge	1	Right	
	12	E406153-002	Hinge Ass'y	1	Right	
	13	SBSF3008M	Screw	8		
	14	E307548-002	Fitting	1	Right	
	15	E406714-001	Screw	10		
	16	E307549-002	Plate	1	Right	
	17	E406137-001	Spring	1		
	18	E406465-002	Knock Pin	1		
	19	E406125-001	Bracket	1		
	20	SBST3006CC	Screw	2		
	21	E03820-006	Push Switch	1		
	22	E306972-002	Play Button	1		
	23	E306970-004	Stop Button	1		
	24	E206830-003	Push Button	1		
	25	E75563-003	Slide Knob	1		
	26	GBSG3008CC	Screw	1		
	27	E306968-004	O/C Button Ass'y	1		
	28	E72405-001	Special Screw	3		
	29	E406154-004	Hinge Ass'y	1	Left	
	30	E305654-003	Damper Ass'y	1		
	31	E307549-001	Plate	1	Left	
	32	E307548-001	Fitting	1	Left	
	33	EWR1KE-14TT	Flat Cable	1		
	34	E406468-001	Screen	1		
	35	EXO020010N70S	Spacer	1		
	36	E406487-001	Rug Wire Sheet	1		
	37	E304525-013	Volume Knob	1		
	38	E406136-001	Headphone Bracket	1		
	39	E406491-001	Front Sheet	1		
	40	E206834-002	Front Bracket	1		
	41	E26527-002	Metal Cover	1		
	42	E61660-004	Special Screw	4		
	43	E307103-001	Metal Cover Bracket	1	Left	
	44	E307102-001	Metal Cover Bracket	1	Right	
	45	E406470-001	Sheet Ass'y	2		
	46	E48729-001	Plastic Rivet	2		
	47	E73967-001	Spacer	2		
	48	E12289-007	Tray	1		
	49	SBSG3006CC	Screw	1		
	50	E306962-002	Center Bracket	1	Right	
	51	E102336-002	Chassis Base	1		

⚠: Safety Parts

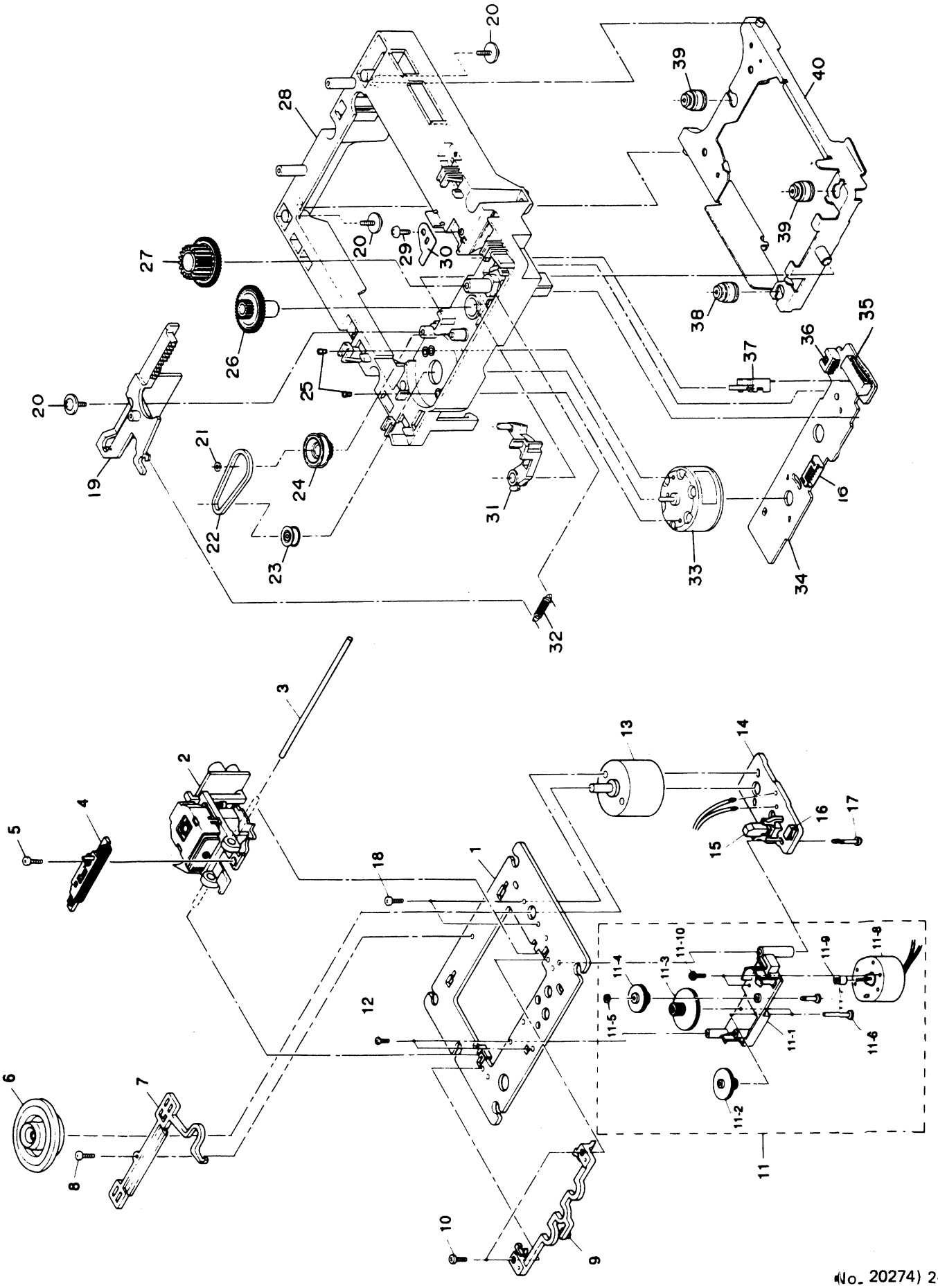
⚠	Item	Part Number	Part Name	Q'ty	Description	Areas
	52	E406126-001	Circuit Board Bracket	2		
	53	E406472-001	Foot	4		
	54	SBST3008Z	Screw	4	for Foot	
	55	SBSF3010M	Screw	9		
	56	E306971-002	Power Button	1		
	57	E306973-001	Push Shaft	1		
	58	E306963-002	Center Bracket	1	Left	
	59	E206832-002	Mecha Base	1		
	60	E306964-001	Trans Bracket	1		
	61	E406471-001	Trans Sheet	1		
	62	E75217-001	Wire Clamp	1		
⚠	63	QMF51U1-1R0	Fuse	1		J , C
⚠	64	ETP1020-37JA	Power Transformer	1		J , C
⚠		ETP1020-37LA	Power Transformer	1		U
⚠		ETP1020-37EA	Power Transformer	1		A , E , G
⚠		ETP1020-37EABS	Power Transformer	1		BS
	65	E65389-004	Special Screw	4	for Transformer	
	66	———	CD Mechanism Unit Ass'y	1	See page 2-7	
	67	EWR1DE-10TT	Flat Cable	1	13pin	
	68	E70267-004	Rubber Tube	2		
	69	EWS256-B102	Socket Wire Ass'y	1	6pin	
	70	EWS25A-B104	Socket Wire Ass'y	1	10pin	
	71	EWS254-B103	Socket Wire Ass'y	1	4pin	
	72	E75871-003	Special Screw	2		
	73	E306837-003	Clamper Ass'y	1		
	73-1	E306836-003	Yoke	1		
	73-2	E74897-002	Magnet	1		
	73-3	E26756-001	Clamper Base	1		
	73-4	E306835-001	Clamper	1		
	74	E206828-004	Rear Panel	1		Except J , U
		E206828-005	Rear Panel	1		U
		E206828-006	Rear Panel	1		J
	—	E25536-069	Rating Label	1		J
	—	E25096-990	Rating Label	1		E
	—	E25096-790	Rating Label	1		C
	—	E25096-991	Rating Label	1		G
	75	E73273-003	Screw	9		
	76	SBSF2608M	Screw	2		U
	77	E66052-008	Screw	1		
⚠	78	QHS3771-108	Cord Stopper	1		Except BS
⚠		QHS3771-108BS	Cord Stopper	1		BS
⚠	79	QMP1480-200	Power Cord	1		J , C
⚠		QMP2560-244	Power Cord	1		A
⚠		QMP3900-200	Power Cord	1		E , G
⚠		QMP7520-200	Power Cord	1		U
⚠		QMP9017-008BS	Power Cord	1		BS
	80	E307724-001	Cover	1		U
	81	E406731-001	Cover	1		Except J , U
	82	E48729-007	Plastic Rivet	2		Except J , U
	—	E61029-005	Number Label	1		A , U , BS
	—	E70891-001	Class 1 Label	1		A , U , G , E , BS
	—	E72423-001	Caution Label	1		C
	—	QZL1001-001	UL Label	1		J
	—	E70419-002F	Approval Label	1		G
	—	E70028-001	Approval Label	1		E
	—	E45858-002	CSA Label	1		C
	—	E406709-001	Mecha Caution Label	1		Except J

⚠: Safety Parts

The Marks Designated Areas

J·····the U.S.A.
C·····Canada
A·····Australia
G·····Germany
BS·····the U.K.
E·····Europe
U·····Universal Type
No mark indicates all areas.

CD Mechanism Ass'y and Parts List



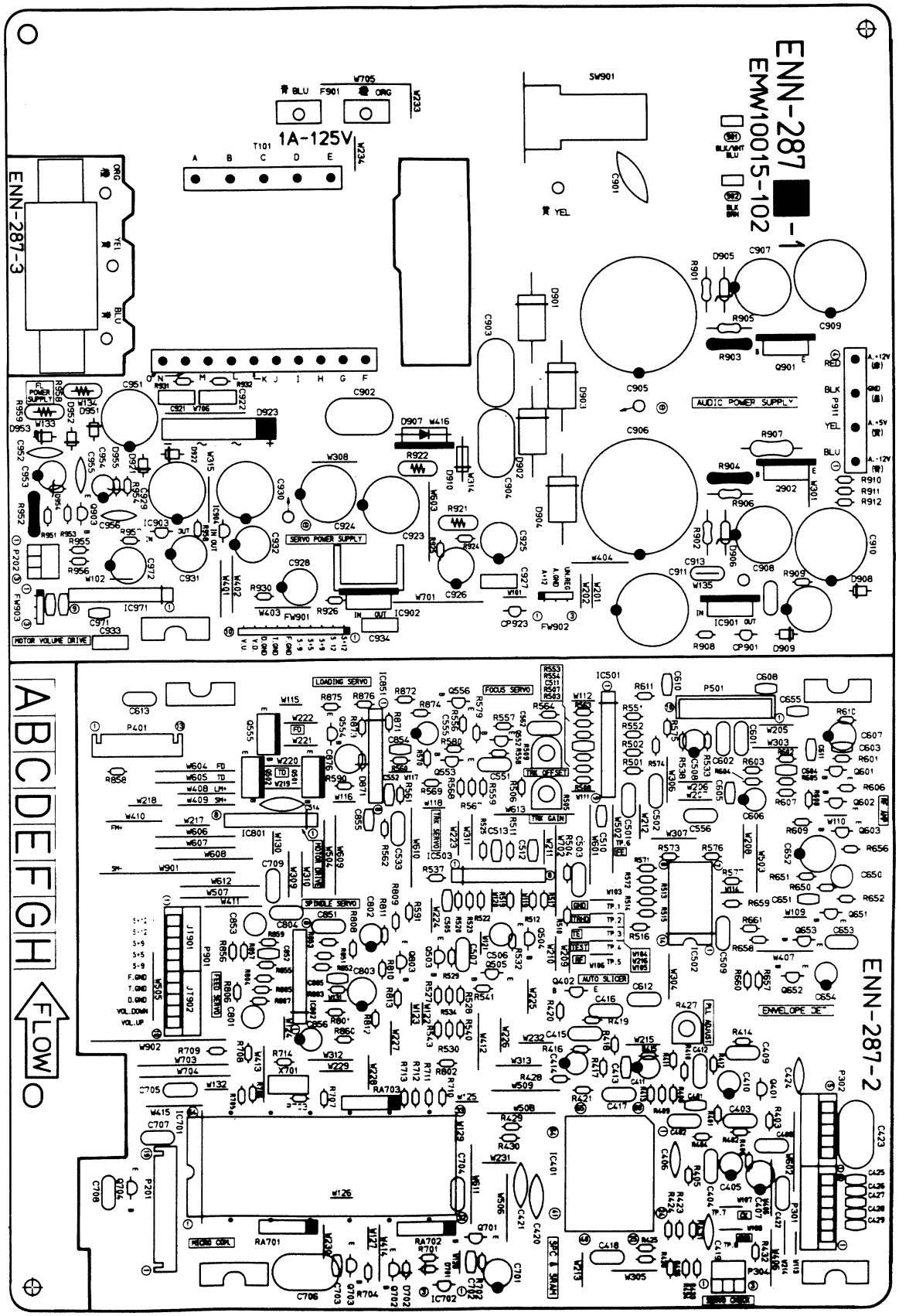
■ Parts List

Item	Part Number	Part Name	Q'ty	Description	Areas
1	E26487-003	Mechanism Base	1		
2	OPTIMA-5S	Pickup Ass'y	1		
3	E74930-003	Shaft	1		
4	E306282-001	Rack Ass'y	1		
5	SPSH2050M	Screw	1		
6	E406064-002	Tern Table Ass'y	1		
7	E306275-003	Support	1		
8	SDST2005Z	Screw	1		
9	E306277-001	Holder	1		
10	SDST2004Z	Screw	2		
11	SE10351-11	Gear Ass'y	1		
11-1	E306276-001	Gear Base	1		
11-2	E75444-001	Gear	1		
11-3	E75443-001	Gear	1		
11-4	E75445-001	Gear	1		
11-5	WDM163550	Slit Washer	1		
11-6	E75494-002	Shaft	1		
11-7	E75494-003	Shaft	2		
11-8	HKN-3A6RDNV	Feed Motor	1		
11-9	E75493-001	Pinion Gear	1		
11-10	LPSH1735Z	Screw	2		
12	E72713-001	Screw	2		
13	E74539-001B	Spindle Motor	1		
14	E12114-005(S)	Circuit Board	1		
15	ESB1100-005	Leaf Switch	1	S001	
16	EMV5109-006B	6P Plug Ass'y	2	P011	
17	E75832-001	Screw	1		
18	SDSP2003N	Screw	2		
19	E306834-001	Cam	1		
20	E65923-003	Special Screw	3		
21	E72024-001	Speed Nut	1		
22	E75950-002	Belt	1		
23	E75984-001	Motor Pulley	1		
24	E75985-001	Gear (1)	1		
25	SPSK2640Z	Screw	2		
26	E75986-002	Gear (2)	1		
27	E75987-001	Gear (3)	1		
28	E12288-002	Loading Base	1		
29	SBSF3008Z	Screw	1		
30	E75988-001	Plate	1		
31	E306833-001	Lever	1		
32	E75989-001	Spring	1		
33	RF-500TB-12560	Loading Motor	1		
34	EMW10045-001(S)	Circuit Board	1		
35	EMV7123-013R	Connector	1	13Pin	
36	EMV5109-004B	Plug Ass'y	1	4Pin	
37	ESS1200-002	Switch	1		
38	E75609-002	Insulator	1		
39	E75609-001	Insulator	2		
40	E307087-001	Elevator Base Ass'y	1		

Printed Circuit Board Ass'y and Parts List

■ENN-287 □ Servo & Power Supply PC Board Ass'y

Note : ENN-287 □ varies according to the areas employed. See note (1) when placing an order.



Note (1)

PC Board Ass'y	Designated Areas
ENN-287 [A]	the U.S.A.
ENN-287 [B]	Canada
ENN-287 [C]	Universal Type
ENN-287 [D]	Europe , Germany
ENN-287 [E]	Australia
ENN-287 [F] BS	the U.K.

Transistors

⚠	ITEM	PART NUMBER	DESCRIPTION		AREA
	Q401	2SD1302(S,T)	SILICON	MATSUSHITA	
	Q402	2SD1302(S,T)	SILICON	MATSUSHITA	
	Q501	2SD2037(E,F)	SILICON	ROHM	
	Q502	2SB1357(E,F)	SILICON	ROHM	
	Q503	2SD1302(S,T)	SILICON	MATSUSHITA	
	Q504	2SD1302(S,T)	SILICON	MATSUSHITA	
	Q505	2SD1302(S,T)	SILICON	MATSUSHITA	
	Q552	2SD1302(S,T)	SILICON	MATSUSHITA	
	Q553	2SA933S(R,S)	SILICON	ROHM	
	Q554	2SC2060(Q,R)	SILICON	ROHM	
	Q555	2SB1357(E,F)	SILICON	ROHM	
	Q556	DTA144WS	SILICON	ROHM	
	Q601	2SC535(B,C)	SILICON	HITACHI	
	Q602	2SC458(C,D)	SILICON	HITACHI	
	Q603	2SA1029(C,D)	SILICON	HITACHI	
	Q651	2SA1029(C,D)	SILICON	HITACHI	
	Q652	2SC458(C,D)	SILICON	HITACHI	
	Q653	2SC458(C,D)	SILICON	HITACHI	
	Q701	DTA114YS	SILICON	ROHM	
	Q702	DTA114YS	SILICON	ROHM	
	Q703	DTC114YS	SILICON	ROHM	
	Q704	DTC114YS	SILICON	ROHM	
	Q803	2SD1302(S,T)	SILICON	MATSUSHITA	
	Q901	2SD313V(D,E)	SILICON	SANYO	
	Q902	2SB507V(D,E)	SILICON	SANYO	
	Q903	2SA933S(R,S)	SILICON	ROHM	

⚠ : SAFETY PARTS

I.C.s.

⚠	ITEM	PART NUMBER	DESCRIPTION		AREA
	IC401	YM7121B	I.C.	YAMAHA	
	IC501	NJM072S	I.C.	DAINICHI	
	IC502	NJM2901N	I.C.	DAINICHI	
	IC503	M5218AL	I.C.	MITSUBISHI	
	IC701	HD404019RB20S	I.C.	HITACHI	
	IC702	MN1281(P,Q)	I.C.	MATSUSHITA	
	IC801	STA341M(A)	I.C.	SANKEN	
	IC802	M5218AL	I.C.	MITSUBISHI	
	IC851	M5218AL	I.C.	MITSUBISHI	
	IC901	NJM78M05FD	I.C.	DAINICHI	
	IC902	NJM78M05FD	I.C.	DAINICHI	
	IC903	NJM78L12A	I.C.	DAINICHI	
	IC904	NJM79L12A	I.C.	DAINICHI	
	IC971	BA6218	I.C.	ROHM	

⚠ : SAFETY PARTS

Diodes

⚠	ITEM	PART NUMBER	DESCRIPTION		AREA
	D701	1SS133	SILICON	ROHM	
	D702	1SS133	SILICON	ROHM	
	D871	1SS133	SILICON	ROHM	
	D901	30DF2SFC	SILICON	NIHONINTER	
	D902	30DF2SFC	SILICON	NIHONINTER	
	D903	30DF2SFC	SILICON	NIHONINTER	
	D904	30DF2SFC	SILICON	NIHONINTER	
	D905	HZ12A2-L	ZENER	HITACHI	
	D906	HZ12A2-L	ZENER	HITACHI	
	D907	F5KF20	DIODE	NIHONINTER	
⚠	D908	ERA15-02L19	SILICON	KYOUDOU	
⚠	D909	ERA15-02L19	SILICON	KYOUDOU	
⚠	D921	ERA15-02L19	SILICON	KYOUDOU	
⚠	D922	ERA15-02L19	SILICON	KYOUDOU	
	D923	D3SBA20F03	SI.DIODE	SINDENGEN	

⚠ : SAFETY PARTS

Diodes

⚠	ITEM	PART NUMBER	DESCRIPTION		AREA
⚠	D951	ERA15-02L19	SILICON	KYOUDOU	
⚠	D952	ERA15-02L19	SILICON	KYOUDOU	
⚠	D953	ERA15-02L19	SILICON	KYOUDOU	
	D954	MTZ33JC	ZENER	ROHM	
	D955	MTZ5.6JC	ZENER	ROHM	

⚠ : SAFETY PARTS

Capacitors

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	C401	QCBB1HK-101	100PF	50V	CERAMIC	
	C402	QFV81HJ-105	1MF	50V	T.FILM	
	C403	QFN81HJ-182	1800PF	50V	MYLAR	
	C404	QFV81HJ-224	0.22MF	50V	T.FILM	
	C405	QETB1EM-106	10MF	25V	ELECTRO	
	C406	QCF21HP-223	0.022MF	50V	CERAMIC	
	C407	QETBOJM-227	220MF	6.3V	ELECTRO	
	C408	QFV81HJ-104	0.1MF	50V	T.FILM	
	C409	QFV81HJ-104	0.1MF	50V	T.FILM	
	C410	QETB1EM-106	10MF	25V	ELECTRO	
	C411	QETB1AM-107	100MF	10V	ELECTRO	
	C412	QFV81HJ-104	0.1MF	50V	T.FILM	
	C413	QCSB1HJ-470	47PF	50V	CERAMIC	
	C414	QETB1EM-106	10MF	25V	ELECTRO	
	C415	QFV81HJ-563	0.056MF	50V	T.FILM	
	C416	QFV81HJ-564	0.56MF	50V	T.FILM	
	C417	QCZ0205-155	1.5MF	25V	CERAMIC	
	C418	QFV81HJ-473	0.047MF	50V	T.FILM	
	C419	QCS21HJ-100	10PF	50V	CERAMIC	
	C420	QCT26CH-680	68PF	50V	CERAMIC	
	C421	QCT26CH-680	68PF	50V	CERAMIC	
	C422	QFV81HJ-473	0.047MF	50V	T.FILM	
	C423	EFZ0101-223S	0.022MF	100V	POLY	
	C501	QFP81HJ-151	150PF	50V	POLY	
	C502	QFP81HJ-121	120PF	50V	POLY	
	C503	QFN81HJ-223	0.022MF	50V	MYLAR	
	C505	QCSB1HK-4R7	4.7PF	50V	CERAMIC	
	C506	QEN51HM-225	2.2MF	50V	NON POLE	
	C507	QFN81HJ-563	0.056MF	50V	MYLAR	
	C508	QETB1CM-226	22MF	16V	ELECTRO	
	C509	QFV81HJ-104	0.1MF	50V	T.FILM	
	C510	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C511	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C512	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C513	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C514	QCF21HP-223	0.022MF	50V	CERAMIC	
	C551	QFN81HJ-183	0.018MF	50V	MYLAR	
	C552	QCBB1HK-271	270PF	50V	CERAMIC	
	C553	QFN81HJ-393	0.039MF	50V	MYLAR	
	C555	QETB1CM-226	22MF	16V	ELECTRO	
	C556	QFV81HJ-104	0.1MF	50V	T.FILM	
	C562	QFV81HJ-224	0.22MF	50V	T.FILM	
	C601	QFN81HJ-472	4700PF	50V	MYLAR	
	C602	QFN81HJ-472	4700PF	50V	MYLAR	
	C603	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C604	QCT30CH-3R9	3.9PF	50V	CERAMIC	
	C605	QCBB1HK-471	470PF	50V	CERAMIC	
	C606	QETB1EM-106	10MF	25V	ELECTRO	
	C607	QETB1CM-107	100MF	16V	ELECTRO	
	C608	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C610	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C611	QCBB1HK-101	100PF	50V	CERAMIC	
	C612	QFV81HJ-183	0.018MF	50V	T.FILM	
	C613	QFV81HJ-103	0.01MF	50V	T.FILM	
	C650	QEN51HM-105	1MF	50V	NON POLE	
	C651	QCBB1HK-101	100PF	50V	CERAMIC	
	C652	QETB1CM-227	220MF	16V	ELECTRO	
	C653	QFN81HJ-473	0.047MF	50V	MYLAR	
	C654	QETB1EM-106	10MF	25V	ELECTRO	
	C701	QETBOJM-227	220MF	6.3V	ELECTRO	
	C702	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C703	QCGB1HK-102	1000PF	50V	CERAMIC	
	C704	QCZ0205-155	1.5MF	25V	CERAMIC	
	C705	QCZ0205-155	1.5MF	25V	CERAMIC	
	C706	EFZ0101-223S	0.022MF		M.MYLAR	
	C707	QFV81HJ-104	0.1MF	50V	T.FILM	
	C709	QCZ0205-155	1.5MF	25V	CERAMIC	
	C801	QEN51HM-225	2.2MF	50V	NON POLE	
	C802	QETB1CM-226	22MF	16V	ELECTRO	
	C803	QETBOJM-227	220MF	6.3V	ELECTRO	
	C804	QCZ0205-155	1.5MF	25V	CERAMIC	
	C805	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C851	QFN81HJ-272	2700PF	50V	MYLAR	
	C852	QCBB1HK-101	100PF	50V	CERAMIC	
	C853	QEN51HM-225	2.2MF	50V	NON POLE	
	C854	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C855	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C856	QETB1HM-474	0.47MF	50V	ELECTRO	
	C876	QEN51HM-475	4.7MF	50V	NON POLE	
⚠	C901	QCZ9050-103A	0.01MF		CERAMIC	A

⚠ : SAFETY PARTS

Capacitors

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
⚠	C901	QCZ9050-103A	0.01MF		CERAMIC	B
⚠	C901	QCZ9050-103A	0.01MF		CERAMIC	C
⚠	C901	QCZ9050-103A	0.01MF		CERAMIC	D
⚠	C901	QCZ9050-103A	0.01MF		CERAMIC	E
⚠	C901	QCZ9050-103ABS	0.01MF		CERAMIC	FBS
	C902	EFZ0101-683S	0.068MF	100V	POLY	
	C903	EFZ0101-104S	0.1MF	100V	POLY	
	C904	EFZ0101-104S	0.1MF	100V	POLY	
	C905	EEZ5005-228	2200MF	50V	ELECTRO	
	C906	EEZ5005-228	2200MF	50V	ELECTRO	
	C907	EEZ5009-227	220MF	50V	ELECTRO	
	C908	EEZ5009-227	220MF	50V	ELECTRO	
	C909	EEZ5006-477	470MF	50V	ELECTRO	
	C910	EEZ5006-477	470MF	50V	ELECTRO	
	C911	EET1606-478N	4700MF	16V	ELECTRO	
	C912	EEZ5011-107E	100MF	50V	ELECTRO	
	C921	EFH001J-104	0.1MF	63V	M.MYLAR	
	C922	EFH001J-104	0.1MF	63V	M.MYLAR	
	C923	EET1602-228N	2200MF	16V	ELECTRO	
	C924	EET1602-228N	2200MF	16V	ELECTRO	
	C925	QETB1CM-227	220MF	16V	ELECTRO	
	C926	QETB1CM-227	220MF	16V	ELECTRO	
	C927	EFH001J-104	0.1MF	63V	M.MYLAR	
	C928	EET0603-108N	1000MF	6.3V	ELECTRO	
	C929	EET2502-108N	1000MF	25V	ELECTRO	
	C930	EET2502-108N	1000MF	25V	ELECTRO	
	C931	QETB1CM-227	220MF	16V	ELECTRO	
	C932	QETB1CM-227	220MF	16V	ELECTRO	
	C933	EFH001J-104	0.1MF	63V	M.MYLAR	
	C934	EFH001J-104	0.1MF	63V	M.MYLAR	
	C951	QETB1EM-108	1000MF	25V	ELECTRO	
	C952	QCF21HP-223	0.022MF	50V	CERAMIC	
	C953	QETB1HM-107	100MF	50V	ELECTRO	
	C954	QETB1HM-476	47MF	50V	ELECTRO	
	C955	QCF21HP-223	0.022MF	50V	CERAMIC	
	C956	QCF21HP-223	0.022MF	50V	CERAMIC	
	C971	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C972	QETB0JM-477	470MF	6.3V	ELECTRO	

⚠ : SAFETY PARTS

Resistors

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	R401	QRD167J-182	1.8K	1/6W	CARBON	
	R402	QRD167J-821	820	1/6W	CARBON	
	R403	QRD167J-682	6.8K	1/6W	CARBON	
	R404	QRD167J-101	100	1/6W	CARBON	
	R405	QRD167J-102	1K	1/6W	CARBON	
	R406	QRD167J-682	6.8K	1/6W	CARBON	
	R408	QRD167J-822	8.2K	1/6W	CARBON	
	R409	QRD167J-822	8.2K	1/6W	CARBON	
	R410	QRD167J-224	220K	1/6W	CARBON	
	R411	QRD167J-184	180K	1/6W	CARBON	
	R412	QRD167J-393	39K	1/6W	CARBON	
	R413	QRD167J-182	1.8K	1/6W	CARBON	
	R414	QRD167J-182	1.8K	1/6W	CARBON	
	R415	QRD167J-122	1.2K	1/6W	CARBON	
	R416	QRD167J-221	220	1/6W	CARBON	
	R417	QRD167J-682	6.8K	1/6W	CARBON	
	R418	QRD167J-471	470	1/6W	CARBON	
	R419	QRD167J-102	1K	1/6W	CARBON	
	R420	QRD167J-183	18K	1/6W	CARBON	
	R421	QRD167J-103	10K	1/6W	CARBON	
	R423	QRD167J-681	680	1/6W	CARBON	
	R424	QRD167J-391	390	1/6W	CARBON	
	R425	QRD167J-391	390	1/6W	CARBON	
	R426	QRD167J-391	390	1/6W	CARBON	
	R427	QVPA601-104A	100K		VARIABLE	
	R428	QRD167J-472	4.7K	1/6W	CARBON	
	R429	QRD167J-472	4.7K	1/6W	CARBON	
	R430	QRD167J-472	4.7K	1/6W	CARBON	
	R431	QRD167J-471	470	1/6W	CARBON	
	R432	QRD167J-122	1.2K	1/6W	CARBON	
	R501	QRD167J-563	56K	1/6W	CARBON	
	R502	QRD167J-563	56K	1/6W	CARBON	
	R503	QRD167J-394	390K	1/6W	CARBON	
	R504	QRD167J-681	680	1/6W	CARBON	
	R505	QVPA601-202A	2K		VARIABLE	
	R506	QRD167J-561	560	1/6W	CARBON	
	R507	QRD167J-334	330K	1/6W	CARBON	
	R508	QRD167J-222	2.2K	1/6W	CARBON	
	R509	QVPA601-154A	150K		VARIABLE	
	R510	QRD167J-223	22K	1/6W	CARBON	
	R511	QRD167J-682	6.8K	1/6W	CARBON	
	R512	QRD167J-103	10K	1/6W	CARBON	
	R513	QRD167J-562	5.6K	1/6W	CARBON	
	R514	QRD167J-562	5.6K	1/6W	CARBON	
	R515	QRD167J-562	5.6K	1/6W	CARBON	

⚠ : SAFETY PARTS

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	R516	QRD167J-562	5.6K	1/6W	CARBON	
	R517	QRD167J-183	18K	1/6W	CARBON	
	R519	QRD167J-103	10K	1/6W	CARBON	
	R520	QRD167J-224	220K	1/6W	CARBON	
	R522	QRD167J-474	470K	1/6W	CARBON	
	R523	QRD167J-474	470K	1/6W	CARBON	
	R525	QRD167J-103	10K	1/6W	CARBON	
	R527	QRD167J-184	180K	1/6W	CARBON	
	R528	QRD167J-184	180K	1/6W	CARBON	
	R529	QRD167J-681	680	1/6W	CARBON	
	R530	QRD167J-183	18K	1/6W	CARBON	
	R532	QRD167J-102	1K	1/6W	CARBON	
	R533	QRD167J-562	5.6K	1/6W	CARBON	
	R534	QRD167J-184	180K	1/6W	CARBON	
	R537	QRD167J-221	220	1/6W	CARBON	
	R538	QRD167J-562	5.6K	1/6W	CARBON	
	R540	QRD167J-183	18K	1/6W	CARBON	
	R541	QRD167J-183	18K	1/6W	CARBON	
	R543	QRD167J-183	18K	1/6W	CARBON	
	R551	QRD167J-104	100K	1/6W	CARBON	
	R552	QRD167J-104	100K	1/6W	CARBON	
	R553	QRD167J-394	390K	1/6W	CARBON	
	R554	QRD167J-394	390K	1/6W	CARBON	
	R556	QRD167J-183	18K	1/6W	CARBON	
	R557	QRD167J-681	680	1/6W	CARBON	
	R558	QRD167J-473	47K	1/6W	CARBON	
	R559	QRD167J-331	330	1/6W	CARBON	
	R560	QRD167J-333	33K	1/6W	CARBON	
	R561	QRD167J-273	27K	1/6W	CARBON	
	R562	QRD167J-394	390K	1/6W	CARBON	
	R563	QRD167J-182	1.8K	1/6W	CARBON	
	R564	QRD167J-121	120	1/6W	CARBON	
	R567	QRD167J-105	1M	1/6W	CARBON	
	R568	QRD167J-470	47	1/6W	CARBON	
	R569	QRD167J-473	47K	1/6W	CARBON	
	R570	QRD167J-272	2.7K	1/6W	CARBON	
	R571	QRD167J-682	6.8K	1/6W	CARBON	
	R572	QRD167J-104	100K	1/6W	CARBON	
	R573	QRD167J-562	5.6K	1/6W	CARBON	
	R574	QRD167J-105	1M	1/6W	CARBON	
	R575	QRD167J-105	1M	1/6W	CARBON	
	R576	QRD167J-104	100K	1/6W	CARBON	
	R577	QRD167J-562	5.6K	1/6W	CARBON	
	R579	QRD167J-104	100K	1/6W	CARBON	
	R580	QRD167J-103	10K	1/6W	CARBON	
	R590	QRD167J-221	220	1/6W	CARBON	
	R591	QRD167J-335	3.3M	1/6W	CARBON	
	R601	QRD167J-183	18K	1/6W	CARBON	
	R602	QRD167J-432	4.3K	1/6W	CARBON	
	R603	QRD167J-391	390	1/6W	CARBON	
	R604	QRD167J-221	220	1/6W	CARBON	
	R605	QRD167J-152	1.5K	1/6W	CARBON	
	R606	QRD167J-561	560	1/6W	CARBON	
	R607	QRD167J-561	560	1/6W	CARBON	
	R608	QRD167J-562	5.6K	1/6W	CARBON	
	R609	QRD167J-152	1.5K	1/6W	CARBON	
	R610	QRD167J-271	270	1/6W	CARBON	
	R611	QRD167J-102	1K	1/6W	CARBON	
	R650	QRD167J-102	1K	1/6W	CARBON	
	R651	QRD167J-103	10K	1/6W	CARBON	
	R652	QRD167J-272	2.7K	1/6W	CARBON	
	R656	QRD167J-271	270	1/6W	CARBON	
	R657	QRD167J-103	10K	1/6W	CARBON	
	R658	QRD167J-562	5.6K	1/6W	CARBON	
	R659	QRD167J-472	4.7K	1/6W	CARBON	
	R660	QRD167J-822	8.2K	1/6W	CARBON	
	R661	QRD167J-103	10K	1/6W	CARBON	
	R701	QRD167J-821	820	1/6W	CARBON	
	R702	QRD167J-103	10K	1/6W	CARBON	
	R703	QRD167J-105	1M	1/6W	CARBON	
	R704	QRD167J-472	4.7K	1/6W	CARBON	
	R709	QRD167J-472	4.7K	1/6W	CARBON	
	R714	QRD167J-103	10K	1/6W	CARBON	
	R801	QRD167J-564	560K	1/6W	CARBON	
	R802	QRD167J-224	220K	1/6W	CARBON	
	R803	QRD167J-393	39K	1/6W	CARBON	
	R804	QRD167J-224	220K	1/6W	CARBON	
	R805	QRD167J-562	5.6K	1/6W	CARBON	
	R806	QRD167J-392	3.9K	1/6W	CARBON	
	R807	QRD167J-221	220	1/6W	CARBON	
	R808	QRD167J-103	10K	1/6W	CARBON	
	R809	QRD167J-102	1K	1/6W	CARBON	
	R810	QRD167J-471	470	1/6W	CARBON	
	R811	QRD167J-683	68K	1/6W	CARBON	
	R812	QRD167J-183	18K	1/6W	CARBON	
	R813	QRD167J-183	18K	1/6W	CARBON	
	R851	QRD167J-684	680K	1/6W	CARBON	
	R852	QRD167J-684	680K	1/6W	CARBON	
	R853	QRD167J-823	82K	1/6W	CARBON	
	R855	QRD167J-683	68K	1/6W	CARBON	

⚠ : SAFETY PARTS

Resistors

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	R856	QRD167J-123	12K	1/6W	CARBON	
	R857	QRD167J-152	1.5K	1/6W	CARBON	
	R858	QRD167J-2R2	2.2	1/6W	CARBON	
	R859	QRD167J-221	220	1/6W	CARBON	
	R860	QRD167J-103	10K	1/6W	CARBON	
	R871	QRD167J-513	51K	1/6W	CARBON	
	R872	QRD167J-513	51K	1/6W	CARBON	
	R873	QRD167J-753	75K	1/6W	CARBON	
	R874	QRD167J-513	51K	1/6W	CARBON	
	R875	QRD167J-221	220	1/6W	CARBON	
	R876	QRD167J-684	680K	1/6W	CARBON	
	R901	ERD141J-102S	1K	1/4W	CARBON	
	R902	ERD141J-102S	1K	1/4W	CARBON	
⚠	R903	QRZ0077-8R2	8.2	1/4W	FUSIBLE	
⚠	R904	QRZ0077-8R2	8.2	1/4W	FUSIBLE	
	R905	ERD141J-121S	120	1/4W	CARBON	
	R906	ERD141J-121S	120	1/4W	CARBON	
	R907	ERD002J-471	470	1/2W	R.NETWORK	
⚠	R921	PTH61G30BD2R2N	2.2		POSISTOR	
⚠	R922	PTH61G30BD2R2N	2.2		POSISTOR	
	R924	QRD167J-104	100K	1/6W	CARBON	
	R925	QRD167J-103	10K	1/6W	CARBON	
	R926	QRD167J-681	680	1/6W	CARBON	
	R930	QRD167J-102	1K	1/6W	CARBON	
	R931	QRD167J-103	10K	1/6W	CARBON	
	R932	QRD167J-103	10K	1/6W	CARBON	
	R951	QRD167J-122	1.2K	1/6W	CARBON	
⚠	R952	QRZ0077-560	56	1/4W	FUSIBLE	
	R953	QRD167J-121	120	1/6W	CARBON	
	R954	QRD167J-562	5.6K	1/6W	CARBON	
	R955	QRD167J-101	100	1/6W	CARBON	
	R956	QRD167J-101	100	1/6W	CARBON	
	R957	QRD167J-102	1K	1/6W	CARBON	
⚠	R958	PTH61G30BD2R2N	2.2		POSISTOR	
⚠	R959	PTH61G30BD2R2N	2.2		POSISTOR	
	RA701	QRB045J-473	47K	1/8W	R.NETWORK	

⚠ : SAFETY PARTS

Others

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
		E65508-002	TAB	
		E70306-001	HEAT SINK	
		E70859-001	EARTH PLATE	
		SBSG3008CC	SCREW	
		EMW10015-102	CIRCUIT BOARD	A
		EMW10015-102	CIRCUIT BOARD	B
		EMW10015-102	CIRCUIT BOARD	C
		QSS1L22-E01	SLIDE SWITCH	C
		EMW10015-102	CIRCUIT BOARD	D
		EMW10015-102	CIRCUIT BOARD	E
		EMW10015-102BS	CIRCUIT BOARD	FBS
	F901	EMG7331-001	FUSE CLIP	A
	F901	EMG7331-001	FUSE CLIP	B
	P201	EMV7123-019	CONNECTOR(19PIN)	
	P202	EMV7122-103	CONNECTOR(3PIN)	
	P301	VMC0107-006	CONNECT TERMINAL(6PIN)	
	P302	VMC0107-005	CONNECT TERMINAL(5PIN)	
	P304	EMV7122-103	CONNECTOR(3PIN)	
	P401	EMV7123-013	CONNECTOR(13PIN)	
	P501	EMV5109-010A	PLUG ASSY	
	P911	E67764-104	WRAPPING TERMINAL	
	X701	ECX0004-194KM	RESONATOR	
⚠	CP901	ICP-N15	I.C. PROTECTOR	
	FW901	EWR3AB-45LST	FLAT WIRE(10PIN)	
	FW902	EWR33B-10LST	FLAT WIRE(3PIN)	
	FW903	EWR33B-10LST	FLAT WIRE(3PIN)	
	JT901	EMV7122-005	CONNECTOR(5PIN)	
	JT902	EMV7122-005	CONNECTOR(5PIN)	
	SW901	QSP4C11-E01	PUSH SWITCH	A
	SW901	QSP4C11-E01	PUSH SWITCH	B
	SW901	QSP4C11-E01	PUSH SWITCH	C
	SW901	QSP4C11-E01	PUSH SWITCH	D
	SW901	QSP4C11-E01	PUSH SWITCH	E
	SW901	QSP4C11-E02BS	PUSH SWITCH	FBS

⚠ : SAFETY PARTS

Transistors

⚠	ITEM	PART NUMBER	DESCRIPTION		AREA
	Q101	2SD400MP(E,F)	SILICON	SANYO	
	Q303	DTC114YS	SILICON	ROHM	
	Q341	2SC3068	SILICON	SANYO	
	Q342	2SC3068	SILICON	SANYO	
	Q343	DTA114YS	SILICON	ROHM	
	Q351	2SK163(N)	F.E.T	NEC	
	Q352	2SK163(N)	F.E.T	NEC	
	Q353	2SC3068	SILICON	SANYO	
	Q354	2SC3068	SILICON	SANYO	
	Q370	2SK170(BL)	F.E.T	TOSHIBA	
	Q371	2SK170(BL)	F.E.T	TOSHIBA	
	Q372	2SJ74(BL)	F.E.T	TOSHIBA	
	Q373	2SJ74(BL)	F.E.T	TOSHIBA	
	Q751	2SC458(C,D)	SILICON	HITACHI	
	Q752	2SC458(C,D)	SILICON	HITACHI	
	Q753	2SA1029(C,D)	SILICON	HITACHI	
	Q754	DTC114YS	SILICON	ROHM	
	Q755	2SD400MP(E,F)	SILICON	SANYO	
	Q756	2SC458(C,D)	SILICON	HITACHI	

⚠ : SAFETY PARTS

I.C.s.

⚠	ITEM	PART NUMBER	DESCRIPTION		AREA
	IC101	UPD74HC74C	I.C.	NEC	
	IC151	JCE4300	I.C.	FUJITSU	
	IC152	YM3414	I.C.	YAMAHA	
	IC201	MSC7112-01SS	I.C.	NIHON DENSO	
	IC202	GP1U561	I.C.	SHARP	
	IC301	NJM78M05FD	I.C.	DAINICHI	
	IC302	JCE4501	I.C.	MATSUSHITA	
	IC321	NJM5532DD	I.C.	DAINICHI	
	IC322	NJM5532DD	I.C.	DAINICHI	
	IC323	NJM5532S	I.C.	DAINICHI	
	IC324	NJM5532S	I.C.	DAINICHI	
	IC971	M5216P	I.C.	MITSUBISHI	

⚠ : SAFETY PARTS

Diodes

⚠	ITEM	PART NUMBER	DESCRIPTION		AREA
	D101	1SS133	SILICON	ROHM	
	D102	1SS133	SILICON	ROHM	
	D103	1SS133	SILICON	ROHM	
	D104	MTZ3.6JB	ZENER	ROHM	
	D105	1SS133	SILICON	ROHM	
	D202	SLR-34DC50F124	L.E.D.	ROHM	
	D203	SLR-34MC50F124	L.E.D.	ROHM	
	D301	10DF2FD	ZENER	NIHONINTER	
	D381	1SS133	SILICON	ROHM	
	D752	1SS133	SILICON	ROHM	
	D753	MTZ4.7JC	ZENER	ROHM	

⚠ : SAFETY PARTS

Capacitors

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	C101	QCT30CH-5R6	5.6PF	50V	CERAMIC	
	C102	QCSB1HJ-470	47PF	50V	CERAMIC	
	C103	QFV81HJ-103	0.01MF	50V	T.FILM	
	C105	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C106	QFV81HJ-103	0.01MF	50V	T.FILM	
	C108	QCT26CH-680	68PF	50V	CERAMIC	
	C109	QCT26CH-680	68PF	50V	CERAMIC	
	C110	QCZ0205-155	1.5MF	25V	CERAMIC	
	C111	QCZ0205-155	1.5MF	25V	CERAMIC	
	C112	EET1002-477N	470MF	10V	ELECTRO	
	C113	QETB1AM-476	47MF	10V	ELECTRO	
	C114	QETB1CM-226	22MF	16V	ELECTRO	
	C115	EET2502-476N	47MF	25V	ELECTRO	
	C116	EET2502-476N	47MF	25V	ELECTRO	
	C141	QCBB1HK-101	100PF	50V	CERAMIC	
	C151	EET1002-477N	470MF	10V	ELECTRO	
	C152	QCZ0205-155	1.5MF	25V	CERAMIC	
	C153	QCT26CH-270	27PF	50V	CERAMIC	
	C156	EFZ0101-683S	0.068MF	100V	POLY	
	C157	QFV81HJ-223	0.022MF	50V	T.FILM	

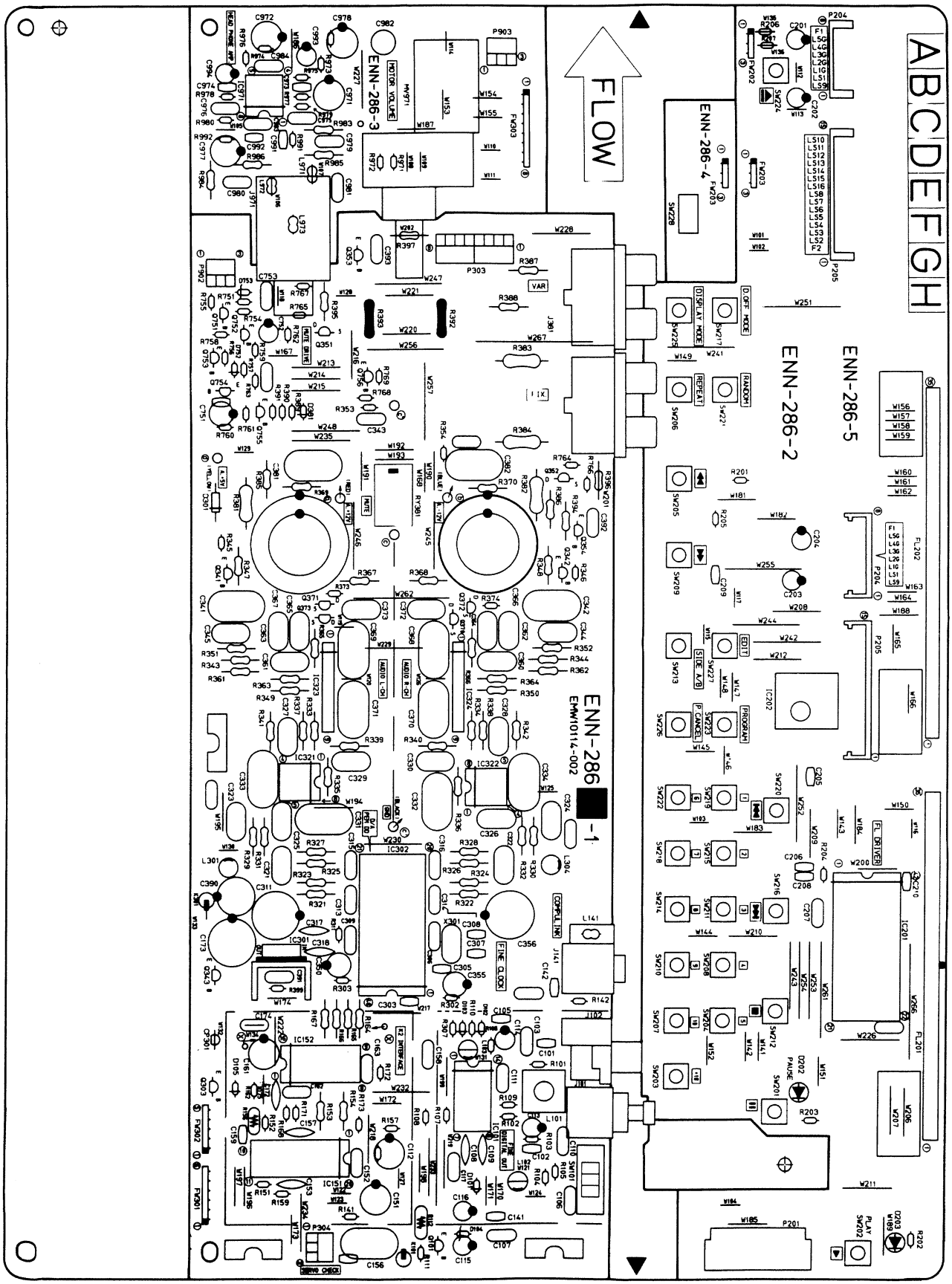
⚠ : SAFETY PARTS

Capacitors

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	C158	QFN81HJ-223	0.022MF	50V	MYLAR	
	C159	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C161	EET1002-477N	470MF	10V	ELECTRO	
	C162	QCZ0205-155	1.5MF	25V	CERAMIC	
	C163	QCZ0205-155	1.5MF	25V	CERAMIC	
	C172	QCT26CH-270	27PF	50V	CERAMIC	
	C173	EET1602-228N	2200MF	16V	ELECTRO	
	C201	QER61HM-475	4.7MF	50V	ELECTRO	
	C202	QER61HM-475	4.7MF	50V	ELECTRO	
	C203	QER61VM-106	10MF	35V	ELECTRO	
	C204	QER60JM-476	47MF	6.3V	ELECTRO	
	C205	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C206	QCBB1HK-101	100PF	50V	CERAMIC	
	C207	QCZ0205-155	1.5MF	25V	CERAMIC	
	C208	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C209	QCSB1HJ-680	68PF	50V	CERAMIC	
	C210	QCBB1HK-471	470PF	50V	CERAMIC	
	C303	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C305	QCSB1HJ-470	47PF	50V	CERAMIC	
	C306	QCZ0205-155	1.5MF	25V	CERAMIC	
	C307	QCT30CH-120	12PF	50V	CERAMIC	
	C308	QCT30CH-3R3	3.3PF	50V	CERAMIC	
	C309	QCZ0205-155	1.5MF	25V	CERAMIC	
	C311	EET1602-228N	2200MF	16V	ELECTRO	
	C313	QCZ0205-155	1.5MF	25V	CERAMIC	
	C314	QCZ0205-155	1.5MF	25V	CERAMIC	
	C315	QCZ0205-155	1.5MF	25V	CERAMIC	
	C316	QCZ0205-155	1.5MF	25V	CERAMIC	
	C317	QCT26CH-5R0	5PF	50V	CERAMIC	
	C318	QCT26CH-5R0	5PF	50V	CERAMIC	
	C321	EFP001G-101S	100PF	100V	POLYPROPY.	
	C322	EFP001G-101S	100PF	100V	POLYPROPY.	
	C323	EFP001G-271S	270PF	100V	POLYPROPY.	
	C324	EFP001G-271S	270PF	100V	POLYPROPY.	
	C325	EFP001G-271S	270PF	100V	POLYPROPY.	
	C326	EFP001G-271S	270PF	100V	POLYPROPY.	
	C327	EFP001G-182S	1800PF	100V	POLYPROPY.	
	C328	EFP001G-182S	1800PF	100V	POLYPROPY.	
	C329	EFP001G-182S	1800PF	100V	POLYPROPY.	
	C330	EFP001G-182S	1800PF	100V	POLYPROPY.	
	C331	EFZ0101-104S	0.1MF	100V	POLYPROPY.	
	C332	EFZ0101-104S	0.1MF	100V	POLYPROPY.	
	C333	EFZ0101-104S	0.1MF	100V	POLYPROPY.	
	C334	EFZ0101-104S	0.1MF	100V	POLYPROPY.	
	C341	EFP001G-683S	0.068MF	100V	POLYPROPY.	
	C342	EFP001G-683S	0.068MF	100V	POLYPROPY.	
	C343	QFN81HJ-223	0.022MF	50V	MYLAR	
	C350	EET1002-107N	100MF	10V	ELECTRO	
	C355	EET1002-107N	100MF	10V	ELECTRO	
	C356	EET1602-228N	2200MF	16V	ELECTRO	
	C360	EFZ0101-222S	2200PF	100V	POLYPROPY.	
	C361	EFZ0101-222S	2200PF	100V	POLYPROPY.	
	C362	EFP001G-133S	0.013MF	100V	POLYPROPY.	
	C363	EFP001G-133S	0.013MF	100V	POLYPROPY.	
	C364	EFZ0101-392S	3900PF	100V	POLYPROPY.	
	C365	EFZ0101-392S	3900PF	100V	POLYPROPY.	
	C366	EEZ5008-476	47MF	50V	ELECTRO	
	C367	EEZ5008-476	47MF	50V	ELECTRO	
	C368	EFZ0101-104S	0.1MF	100V	POLYPROPY.	
	C369	EFZ0101-104S	0.1MF	100V	POLYPROPY.	
	C370	EFZ0101-104S	0.1MF	100V	POLYPROPY.	
	C371	EFZ0101-104S	0.1MF	100V	POLYPROPY.	
	C381	EFZ0101-333S	0.033MF	100V	POLYPROPY.	
	C382	EFZ0101-333S	0.033MF	100V	POLYPROPY.	
	C390	EET2502-477N	470MF	25V	ELECTRO	
	C391	QCZ0205-155	1.5MF	25V	CERAMIC	
	C392	EFZ0101-562S	5600PF	100V	POLYPROPY.	
	C393	EFZ0101-562S	5600PF	100V	POLYPROPY.	
	C751	QETB1CM-477	470MF	16V	ELECTRO	
	C752	QETB1EM-106	10MF	25V	ELECTRO	
	C753	QFN81HJ-103	0.01MF	50V	MYLAR	
	C971	EEZ5007-475N	4.7MF	50V	ELECTRO	
	C972	EEZ5007-475N	4.7MF	50V	ELECTRO	
	C973	QCSB1HJ-680	68PF	50V	CERAMIC	
	C974	QCSB1HJ-680	68PF	50V	CERAMIC	
	C975	QFP81HJ-121	120PF	50V	POLY	
	C976	QFP81HJ-121	120PF	50V	POLY	
	C977	EET2502-477N	470MF	25V	ELECTRO	
	C978	EET2502-477N	470MF	25V	ELECTRO	
	C979	QFN81HJ-183	0.018MF	50V	MYLAR	
	C980	QFN81HJ-183	0.018MF	50V	MYLAR	
	C981	QFV81HJ-103	0.01MF	50V	T.FILM	
	C982	QEN51HM-475	4.7MF	50V	NON POLE	
	C983	QFV81HJ-223	0.022MF	50V	T.FILM	
	C984	QFV81HJ-223	0.022MF	50V	T.FILM	
	C991	QCBB1HK-151	150PF	50V	CERAMIC	
	C992	QCBB1HK-151	150PF	50V	CERAMIC	
	C993	EET2502-476N	47MF	25V	ELECTRO	
	C994	EET2502-476N	47MF	25V	ELECTRO	

⚠ : SAFETY PARTS

■ENN-286 [A] Audio & Front PC Board Ass'y



Resistors

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	R101	QRD167J-160	16	1/6W	CARBON	
	R102	QRD167J-750	75	1/6W	CARBON	
	R103	QRD167J-100	10	1/6W	CARBON	
	R104	QRD167J-223	22K	1/6W	CARBON	
	R105	QRD167J-181	180	1/6W	CARBON	
	R106	QRD167J-223	22K	1/6W	CARBON	
	R107	QRD167J-101	100	1/6W	CARBON	
	R108	QRD167J-224	220K	1/6W	CARBON	
	R109	QRD167J-224	220K	1/6W	CARBON	
	R110	QRD167J-331	330	1/6W	CARBON	
	R111	QRD167J-181	180	1/6W	CARBON	
⚠	R112	PTH61G30BD2R2N	2.2		POSISTOR	
	R141	QRD167J-471	470	1/6W	CARBON	
	R142	QRD167J-101	100	1/6W	CARBON	
	R151	QRD167J-331	330	1/6W	CARBON	
	R152	QRD167J-561	560	1/6W	CARBON	
	R153	ERD141J-561S	560	1/4W	CARBON	
	R154	ERD141J-561S	560	1/4W	CARBON	
	R156	PTH60G30BD101N	100		POSISTOR	
	R157	QRD167J-102	1K	1/6W	CARBON	
	R159	QRD167J-331	330	1/6W	CARBON	
	R162	QRD167J-102	1K	1/6W	CARBON	
	R164	ERD141J-561S	560	1/4W	CARBON	
	R165	ERD141J-561S	560	1/4W	CARBON	
	R166	ERD141J-561S	560	1/4W	CARBON	
	R167	ERD141J-561S	560	1/4W	CARBON	
	R168	QRD167J-681	680	1/6W	CARBON	
	R171	QRD167J-681	680	1/6W	CARBON	
	R172	QRD167J-222	2.2K	1/6W	CARBON	
	R173	QRD167J-513	51K	1/6W	CARBON	
	R201	QRD167J-473	47K	1/6W	CARBON	
	R202	QRD167J-221	220	1/6W	CARBON	
	R203	QRD167J-331	330	1/6W	CARBON	
	R204	QRD167J-273	27K	1/6W	CARBON	
	R205	QRD167J-103	10K	1/6W	CARBON	
	R302	QRD167J-300	30	1/6W	CARBON	
	R303	QRD167J-150	15	1/6W	CARBON	
	R307	QRD167J-103	10K	1/6W	CARBON	
	R311	QRD167J-181	180	1/6W	CARBON	
	R321	ERD141F-183S	18K	1/4W	CARBON	
	R322	ERD141F-183S	18K	1/4W	CARBON	
	R323	ERD141F-183S	18K	1/4W	CARBON	
	R324	ERD141F-183S	18K	1/4W	CARBON	
	R325	ERD141F-183S	18K	1/4W	CARBON	
	R326	ERD141F-183S	18K	1/4W	CARBON	
	R327	ERD141F-183S	18K	1/4W	CARBON	
	R328	ERD141F-183S	18K	1/4W	CARBON	
	R329	ERD141J-102S	1K	1/4W	CARBON	
	R330	ERD141J-102S	1K	1/4W	CARBON	
	R331	ERD141J-102S	1K	1/4W	CARBON	
	R332	ERD141J-102S	1K	1/4W	CARBON	
	R333	ERD141F-162S	1.6K	1/4W	CARBON	
	R334	ERD141F-162S	1.6K	1/4W	CARBON	
	R335	ERD141F-162S	1.6K	1/4W	CARBON	
	R336	ERD141F-162S	1.6K	1/4W	CARBON	
	R337	ERD141F-152S	1.5K	1/4W	CARBON	
	R338	ERD141F-152S	1.5K	1/4W	CARBON	
	R339	ERD141F-152S	1.5K	1/4W	CARBON	
	R340	ERD141F-152S	1.5K	1/4W	CARBON	
	R341	ERD141F-471S	470	1/4W	CARBON	
	R342	ERD141F-471S	470	1/4W	CARBON	
	R343	ERD141F-201S	200	1/4W	CARBON	
	R344	ERD141F-201S	200	1/4W	CARBON	
	R345	QRD167J-182	1.8K	1/6W	CARBON	
	R346	QRD167J-182	1.8K	1/6W	CARBON	
	R347	ERD141J-824S	820K	1/4W	CARBON	
	R348	ERD141J-824S	820K	1/4W	CARBON	
	R349	ERD141J-270S	27	1/4W	CARBON	
	R350	ERD141J-270S	27	1/4W	CARBON	
	R351	ERD141J-360S	36	1/4W	CARBON	
	R352	ERD141J-360S	36	1/4W	CARBON	
	R353	QRD167J-105	1M	1/6W	CARBON	
	R354	QRD167J-104	100K	1/6W	CARBON	
	R361	ERD141J-621S	620	1/4W	CARBON	
	R362	ERD141J-621S	620	1/4W	CARBON	
	R363	ERD141J-751S	750	1/4W	CARBON	
	R364	ERD141J-751S	750	1/4W	CARBON	
	R365	ERD141J-821S	820	1/4W	CARBON	
	R366	ERD141J-821S	820	1/4W	CARBON	
	R367	ERD141J-103S	10K	1/4W	CARBON	
	R368	ERD141J-103S	10K	1/4W	CARBON	
	R369	ERD141J-273S	27K	1/4W	CARBON	
	R370	ERD141J-273S	27K	1/4W	CARBON	
	R373	QRD167J-121	120	1/6W	CARBON	
	R374	QRD167J-121	120	1/6W	CARBON	
	R381	ERD002J-560	56	1/2W	CARBON	
	R382	ERD002J-560	56	1/2W	CARBON	

⚠ : SAFETY PARTS

Resistors

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	R383	ERD002J-470	47	1/2W	CARBON	
	R384	ERD002J-470	47	1/2W	CARBON	
	R385	ERD141J-271S	270	1/4W	CARBON	
	R386	ERD141J-271S	270	1/4W	CARBON	
	R387	ERD141J-151S	150	1/4W	CARBON	
	R388	ERD141J-151S	150	1/4W	CARBON	
	R389	QRD167J-151	150	1/6W	CARBON	
	R390	QRD167J-151	150	1/6W	CARBON	
	R391	QRD167J-151	150	1/6W	CARBON	
⚠	R392	QRZ0077-220	22	1/4W	FUSIBLE	
⚠	R393	QRZ0077-220	22	1/4W	FUSIBLE	
	R394	ERD141J-101S	100	1/4W	CARBON	
	R395	ERD141J-101S	100	1/4W	CARBON	
	R399	QRD167J-102	1K	1/6W	CARBON	
	R751	QRD167J-102	1K	1/6W	CARBON	
	R754	QRD167J-183	18K	1/6W	CARBON	
	R755	QRD167J-183	18K	1/6W	CARBON	
	R756	QRD167J-104	100K	1/6W	CARBON	
	R757	QRD167J-183	18K	1/6W	CARBON	
	R758	QRD167J-333	33K	1/6W	CARBON	
	R759	QRD167J-181	180	1/6W	CARBON	
	R760	QRD167J-103	10K	1/6W	CARBON	
	R761	QRD167J-103	10K	1/6W	CARBON	
	R762	QRD167J-104	100K	1/6W	CARBON	
	R763	QRD167J-105	1M	1/6W	CARBON	
	R764	QRD167J-103	10K	1/6W	CARBON	
	R765	QRD167J-103	10K	1/6W	CARBON	
	R766	QRD167J-103	10K	1/6W	CARBON	
	R767	QRD167J-103	10K	1/6W	CARBON	
	R768	QRD167J-393	39K	1/6W	CARBON	
	R769	QRD167J-182	1.8K	1/6W	CARBON	
	R971	QRD167J-151	150	1/6W	CARBON	
	R972	QRD167J-151	150	1/6W	CARBON	
	R973	QRD167J-473	47K	1/6W	CARBON	
	R974	QRD167J-473	47K	1/6W	CARBON	
	R975	QRD167J-103	10K	1/6W	CARBON	
	R976	QRD167J-103	10K	1/6W	CARBON	
	R977	QRD167J-273	27K	1/6W	CARBON	
	R978	QRD167J-273	27K	1/6W	CARBON	
	R979	QRD167J-273	27K	1/6W	CARBON	
	R980	QRD167J-273	27K	1/6W	CARBON	
	R983	ERD141J-390S	39	1/4W	CARBON	
	R984	ERD141J-390S	39	1/4W	CARBON	
	R985	ERD141J-220S	22	1/4W	CARBON	
	R986	ERD141J-220S	22	1/4W	CARBON	
	R991	QRD167J-331	330	1/6W	CARBON	
	R992	QRD167J-331	330	1/6W	CARBON	

⚠ : SAFETY PARTS

Others

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
		EMW10114-002	CIRCUIT BOARD	
		E306406-001	BEARING CASE	
		E307550-001	SHIELD CASE	
		E3400-439	SPACER	
		E406127-001	HOLDER	
		E406128-001	HOLDER	
		E406479-001	LABEL	
		E406631-001	LABEL	
		E406656-001	EARTH PLATE	
		E70306-001	HEAT SINK	
		E70859-001	EARTH PLATE	
		E75621-001	BRACKET	
		E75717-001	PRESET PLATE	
		E75833-001	SPACER	
		SBSG3008CC	SCREW	
	J101	RFB011T	OPTICAL JACK	
	J102	EMN00TV-109A	1P PIN JACK	
	J141	QMS3501-020	MINI JACK	
	J381	EMN00YV-405A	4P PIN JACK	
	J971	QMS6302-136	HEADPHONE JACK	
	K101	ENZ8101-008	F.BEADS	
	L101	ENZ3003-001	I.F.TRANSFORMER	
	L141	EQL4004-1R0	INDUCTOR	
	L301	EQL6002-1R0K	INDUCTOR	
	L304	EQL6002-1R0K	INDUCTOR	
	L971	EQL4004-1R0	INDUCTOR	
	L972	EQL4004-1R0	INDUCTOR	
	L973	EQL4004-1R0	INDUCTOR	
	P201	EMV7123-019R	CONNECTOR(19PIN)	
	P204	EMV5120-008	PLUG ASSY(8PIN)	
	P204	EMV7120-008	CONNECTOR(8PIN)	
	P205	EMV5120-015	PLUG ASSY(15PIN)	
	P205	EMV7120-015	CONNECTOR(15PIN)	
	P304	EMV7122-103	CONNECTOR(3PIN)	
	P902	EMV7122-103	CONNECTOR(3PIN)	
	P903	EMV7122-103	CONNECTOR(3PIN)	

⚠ : SAFETY PARTS

Others

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	X301	ECX0169-344EA	RESONATOR	
⚠	CP301	ICP-N5	I.C. PROTECTOR	
	FL201	ELU0001-104	FL TUBE	
	FL202	ELU0001-103	FL TUBE	
	FW202	EWR33B-16LST	FLAT WIRE(3PIN)	
	FW203	EWR33B-08SST	FLAT WIRE(3PIN)	
	FW301	EWR36B-08LST	FLAT WIRE(6PIN)	
	FW302	EWR35B-08LST	FLAT WIRE(5PIN)	
	FW303	EWR38B-35LST	FLAT WIRE(8PIN)	
	JT311	EMV7122-004	CONNECTOR(4PIN)	
	JT312	EMV7122-004	CONNECTOR(4PIN)	
	MV971	QVJB94B-E24E	VARIABLE RESISTOR	
	RY381	ESK5D12-211	RELAY	
	SW101	QSS1F22-E01	SLIDE SWITCH(DIGITAL OUT)	
	SW201	ESP0001-018	TACT SWITCH(PAUSE)	
	SW202	ESP0001-018	TACT SWITCH(PLAY)	
	SW203	ESP0001-018	TACT SWITCH(+10)	
	SW204	ESP0001-018	TACT SWITCH(5)	
	SW205	ESP0001-018	TACT SWITCH(REW)	
	SW206	ESP0001-018	TACT SWITCH(REPEAT)	
	SW207	ESP0001-018	TACT SWITCH(10)	
	SW208	ESP0001-018	TACT SWITCH(4)	
	SW209	ESP0001-018	TACT SWITCH(FF)	
	SW210	ESP0001-018	TACT SWITCH(9)	
	SW211	ESP0001-018	TACT SWITCH(3)	

⚠ : SAFETY PARTS

Others

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	SW212	ESP0001-018	TACT SWITCH(STOP)	
	SW213	ESP0001-018	TACT SWITCH(SIDE A/B)	
	SW214	ESP0001-018	TACT SWITCH(8)	
	SW215	ESP0001-018	TACT SWITCH(2)	
	SW216	ESP0001-018	TACT SWITCH(SKIP↑)	
	SW217	ESP0001-018	TACT SWITCH(DISPLAY OFF MODE)	
	SW218	ESP0001-018	TACT SWITCH(7)	
	SW219	ESP0001-018	TACT SWITCH(1)	
	SW220	ESP0001-018	TACT SWITCH(SKIP↓)	
	SW221	ESP0001-018	TACT SWITCH(RANDOM)	
	SW222	ESP0001-018	TACT SWITCH(6)	
	SW223	ESP0001-018	TACT SWITCH(PROGRAM)	
	SW224	ESP0001-018	TACT SWITCH(OPEN/CLOSE)	
	SW225	ESP0001-018	TACT SWITCH(DISPLAY MODE)	
	SW226	ESP0001-018	TACT SWITCH(PROGRAM CANCEL)	
	SW227	ESP0001-018	TACT SWITCH(EDIT)	
	SW228	QSS1A12-E01	SLIDE SWITCH(TIMER PLAY SWITCH)	

⚠ : SAFETY PARTS

Accessories List

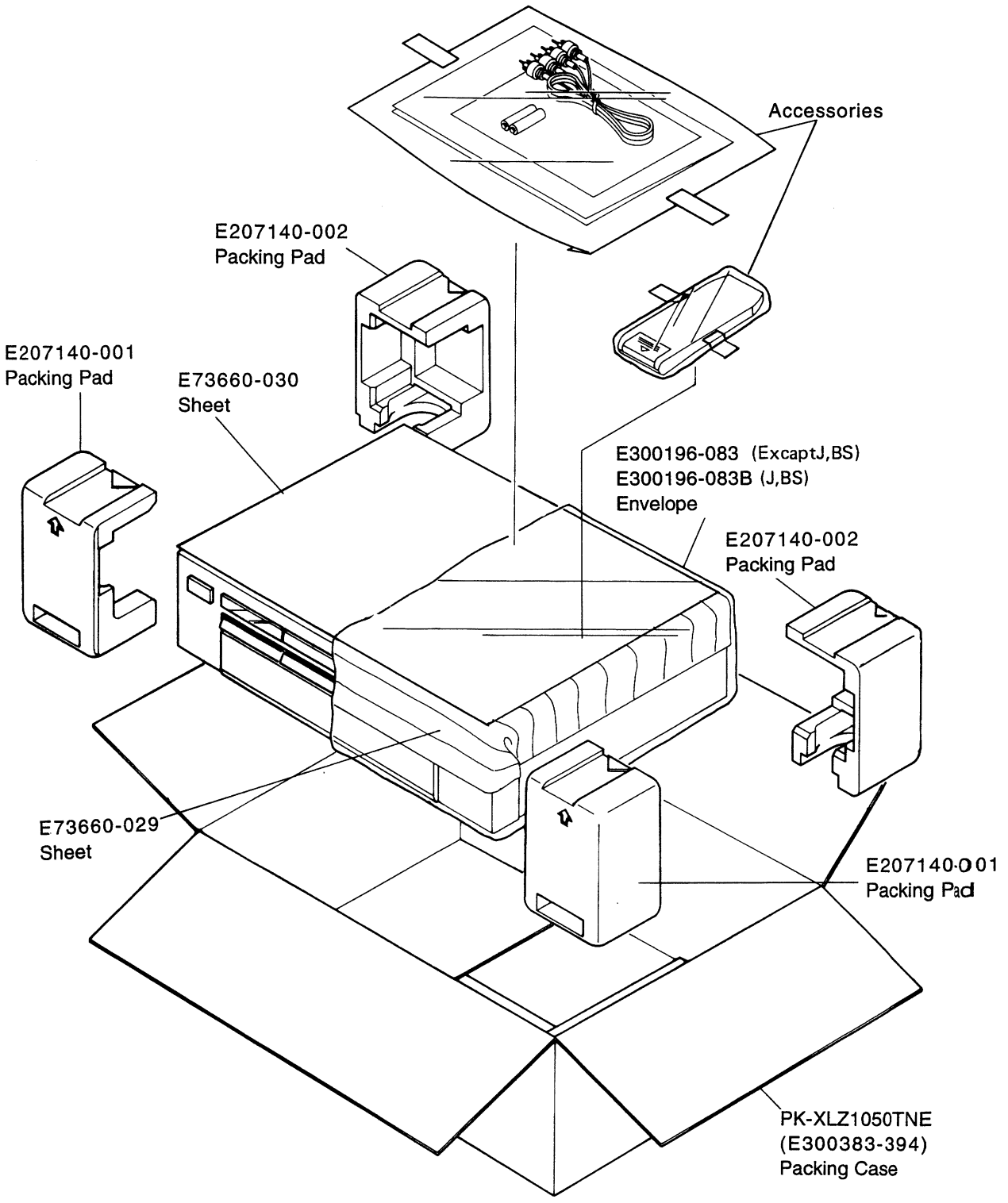
⚠	Part Number	Part Name	Q'ty	Description	Areas
	E30580-1746A	Instruction Book	1		Except J, BS
	E30580-1746ABS	Instruction Book	1		BS
	BT-20117	Warranty Card	1		G
	BT20060	Warranty Card	1		BS
	BT-20025K	Warranty Card	1		C
	BT-20122	Warranty Card	1		A
	BT-20122-1	Sticker	1		A
	BT20066A	EEC Agency	1		BS
	BT-20044G	Safety Instruction Sheet	1		J
	BT20071A	Service Center List	1		C
	E43486-340A	Safety Sheet	1		BS
	EWP302-018	Signal Cord	1		
	EWP805-009K	1P Plug Cord	1		
⚠	E04056	Siemens Plug	1		U
	E35497-022	Caution Sheet	1	220V	U
	RM-SX1050U	Remote Controller	1		
	RM-SX1050UBATC	Battery Cover	1		
	UM-4NJ-2PSA	Battery	1		
	BT-20047F	Warranty Card	1		J
	BT-20108A	Service Information	1		J
	E66416-003	Envelope	1	for Warranty Card	J
	E300196-010	Envelope	1		Except J, BS
	E300196-010B	Envelope	1		J, BS

⚠: Safety Parts

The Marks Designated Areas

J·····the U.S.A.
C·····Canada
A·····Australia
G·····Germany
BS·····the U.K.
E·····Europe
U·····Universal Type
No mark indicates all areas.

Packing Materials and Part Numbers



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—MEMO—